Joystick

D21/13
48

D13/12,32
11,37

273/1 GC 85G
DIG 28
148 B (Access)

200/5A
6A

340/709

178/18-20

Rm 4-11C30

364/190

Joysticks

Video Controls

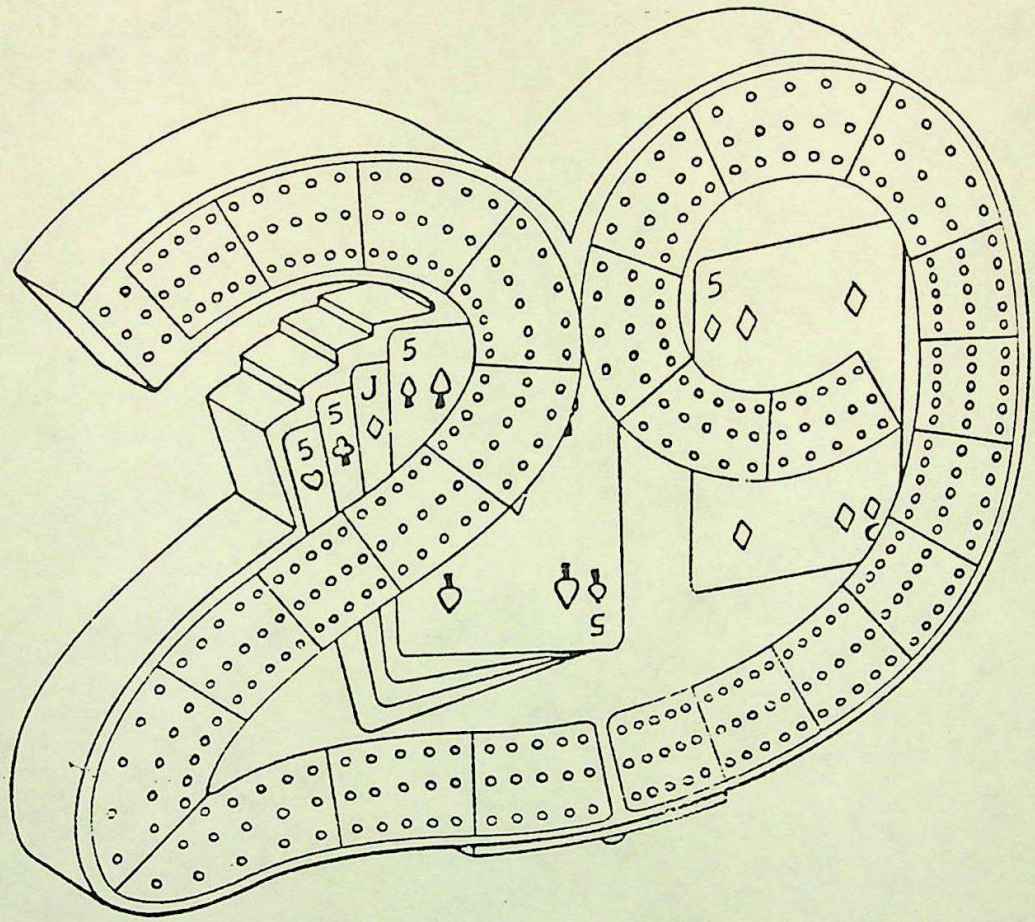
200/5R
6A } 8th floor Scott Shepherd

340/710
365 others = 4-5D34

74/471 X,Y = near Jimmy

273/148B

D14/114
D13/32,12



CRIBBAGE BOARD
No. 20554/141 - Reg'd. June 4, 1956
EDWARD M. HIRST, North Burnaby, B. C.
File No. D-22867

CANADIAN PATENT
IN D10/46-1 AND BOX

200-6.A 17 484, 489

Nov. 1, 1966 J. SCOW ETAL 3,283,088

MULTIPLE CIRCUIT SWITCH APPARATUS WITH IMPROVED PIVOT ACTUATOR STRUCTURE

Filed Sept. 1, 1965 3 Sheets-Sheet 1

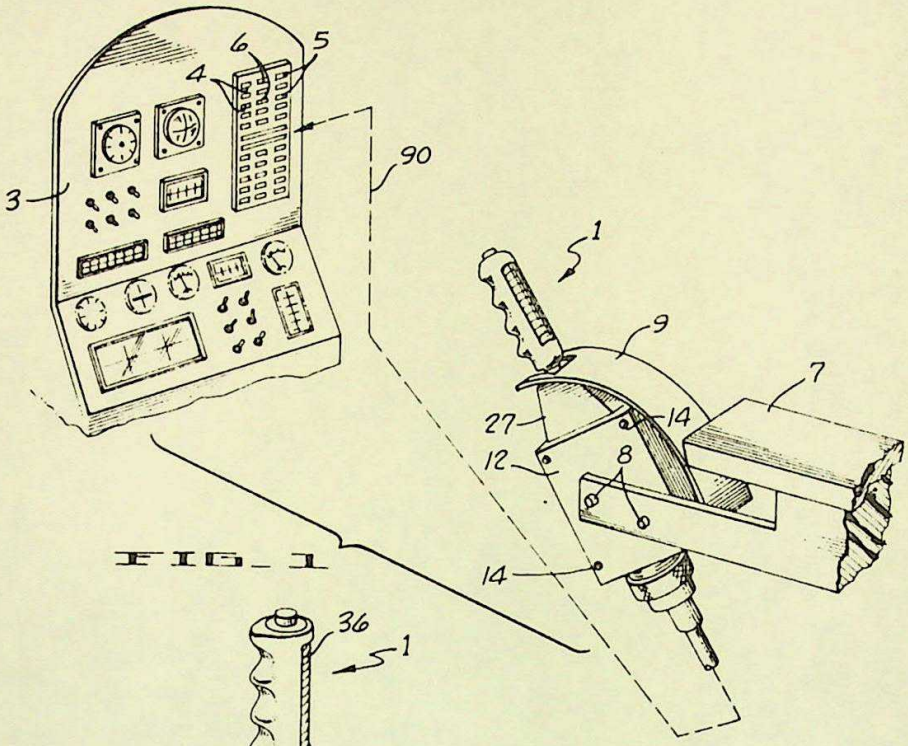


FIG_1

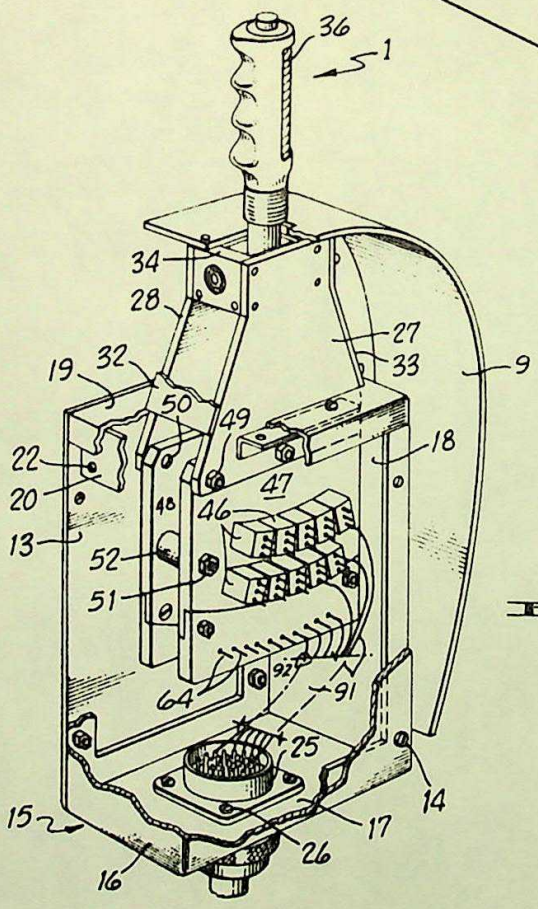


FIG_2

INVENTORS
JIM SCOW and
JAMES L. JONES

BY Atty McCoy
Donald G. Bailey 415-961-2667
ATTORNEYS

13-37101
21191
24391

340-710 AU 234 EX EXAMINER

OR 3,541,541 234

D. C. ENGELBART 3,541,541

X-Y POSITION INDICATOR FOR A DISPLAY SYSTEM

Filed June 21, 1967 3 Sheets-Sheet 1

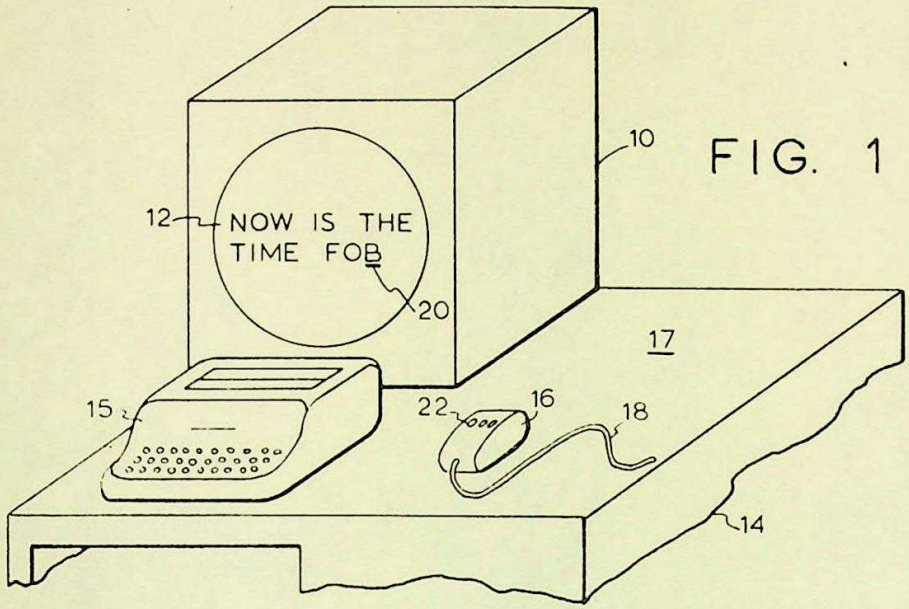


FIG. 1

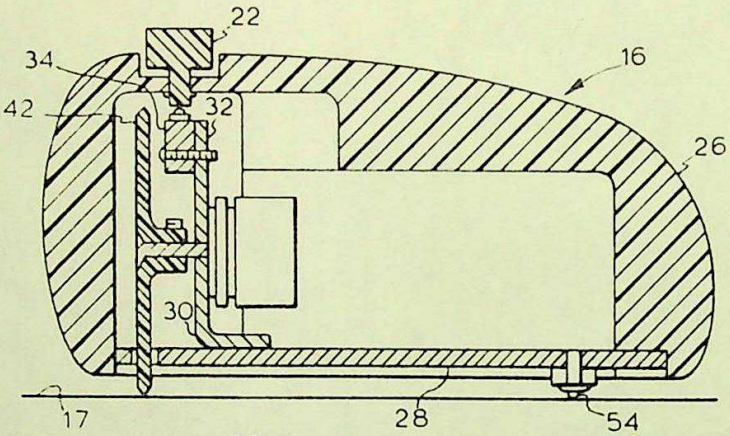


FIG. 2

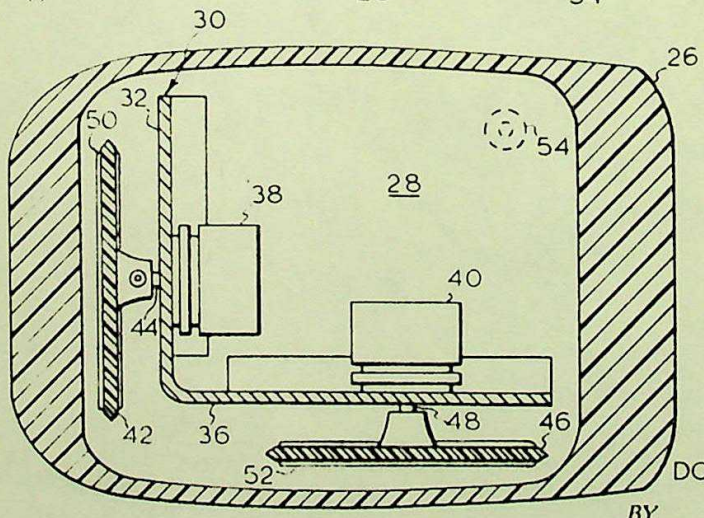


FIG. 3

INVENTOR.
DOUGLAS C. ENGELBART

BY Lindenberg + Freilich

ATTORNEYS

200-6 A AU 217 EX CROSS REFERENCE EXAMINER

XR 3,373,957

200-6.R 17

217

[redacted]

March 19, 1968 W. BUDDE 3,373,957

REMOTE VEHICLE CONTROL

Filed March 28, 1966

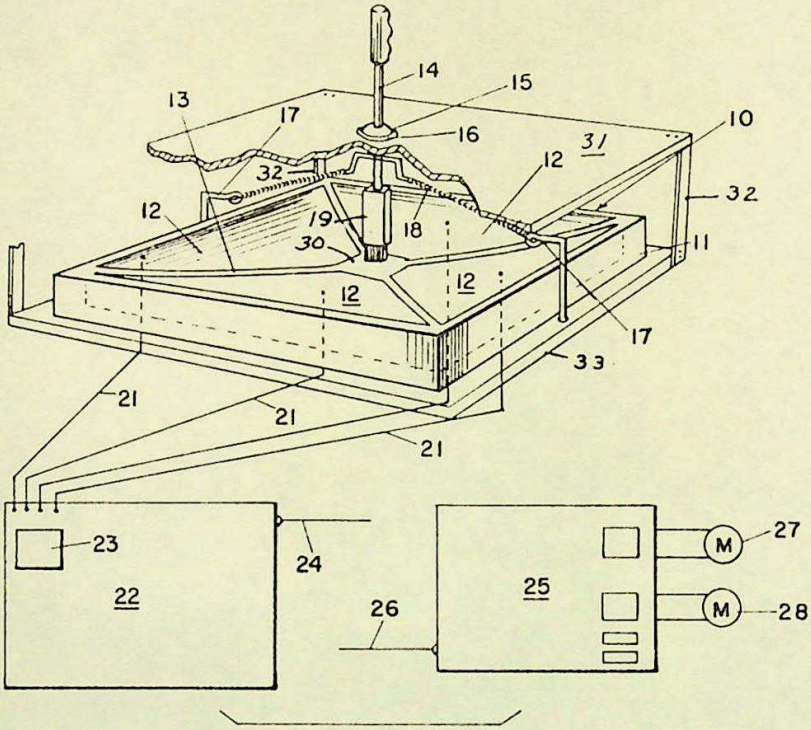


FIG. 1

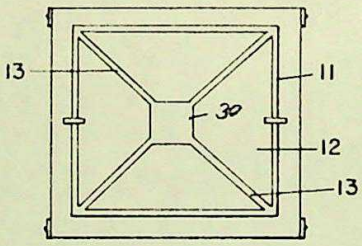


FIG. 3

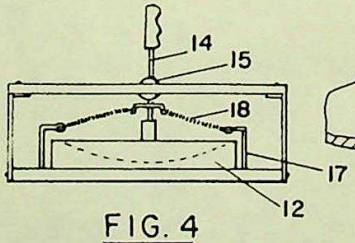


FIG. 4

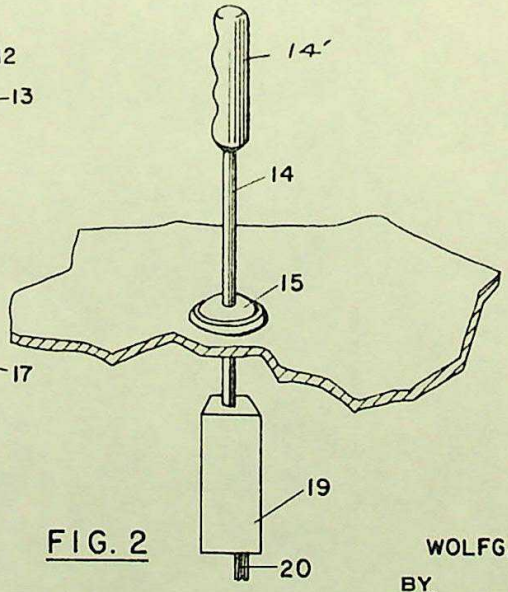


FIG. 2

INVENTOR
WOLFGANG BUDDE
BY
Charles L. Lowrechesk
attorney

NOT PLACE IN SEARCH FILE

364/522

United States Patent

[11] 3,621,214

[72] Inventors Gordon W. Romney
1521 Princeton Avenue, Salt Lake City;
David C. Evans, 1393 East South Temple,
Salt Lake City; Alan C. Erdahl, 2277 East
1700 South, Salt Lake City, Utah; Chris R.
Wylie, deceased, late of Salt Lake City,
Utah Patricia A. Wylie, administratrix

[21] Appl. No. 802,702
[22] Filed Nov. 13, 1968
[45] Patented Nov. 16, 1971

[54] ELECTRONICALLY GENERATED PERSPECTIVE IMAGES
48 Claims, 66 Drawing Figs.

[52] U.S. Cl. 235/151, 340/172.5, 315/18
[51] Int. Cl. G06f 7/00, G06f 9/12
[50] Field of Search ..... 343/7.9, 35/10.4, 33/18 C, 340/324.1, 235/151

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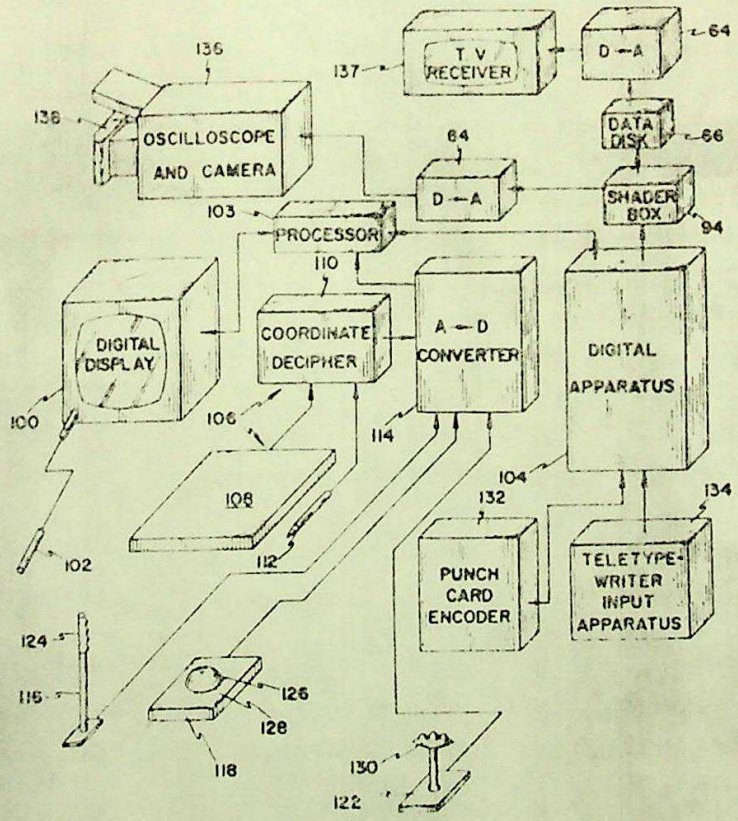
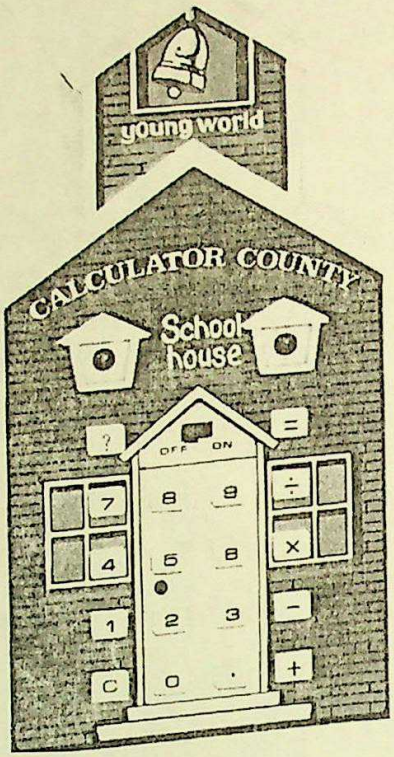
1,016,444	1/1966	Great Britain	235/151

Primary Examiner—Eugene G. Botz
Attorney—Lynn G. Foster

ABSTRACT: A method and system for electronically generating and displaying two-dimensional perspective images which visually define three dimensional objects by providing electrical signals representative of the surfaces of an object, converting, ordering and utilizing the signals to identify and display only visible surfaces and to control brightness along the visible surfaces of the eventual electronic display. More specifically, units of the electrical signals define surface portions of the object. These units are converted to define the projections of the surfaces defined by the units onto a two-dimensional image or view plane. The converted units are sorted to conform to the scanning pattern of the display device and those units which are to be visible, depending on the desired orientation of the object, are determined. The visual characteristics of the visible units are then calculated and converted to suitable form for controlling the intensity of the electronic display.





The educational toy category has also been electrified with the introduction of teaching devices such as this "Calculator County Schoolhouse" from Midland.

reacting to the trend, doubling and tripling the amount of electronic merchandise they carried last Christmas. **Dennis Frank** of Houston's **Playhouse** chain reports that during fourth quarter 1977 "about five percent" of his merchandise will fall into the category. "But," he adds, "that's four-and-a-half percent more than last year."

As electronic toys go through their infancy, manufacturers and retailers are searching for the formula that will produce maximum sales in the category. Among the questions being asked:

* *How much money is the consumer prepared to pay for a leisure time item?*
* *How low can prices be expected to go?*
* *Where in a general merchandise store can the shopper expect to find an electronic game?*
* *How can the games be best displayed?*

Though the answers to none of these queries are readily apparent, it's acknowledged that *somebody* is on the right track. Video game manufacturers sold an estimated 3½ million pieces last year and, keyed by the introduction of programmable systems by several companies, project that between eight and ten million units will move through retail stores during 1977.

Since video games were introduced by Magnavox in 1972, they have had the electronic end of the toy business pretty much to themselves. But an avalanche of target games, pin-ball games, calculator games and even a couple of preschool items are taking advantage of chip technology and vying for the consumer dollar in 1977.

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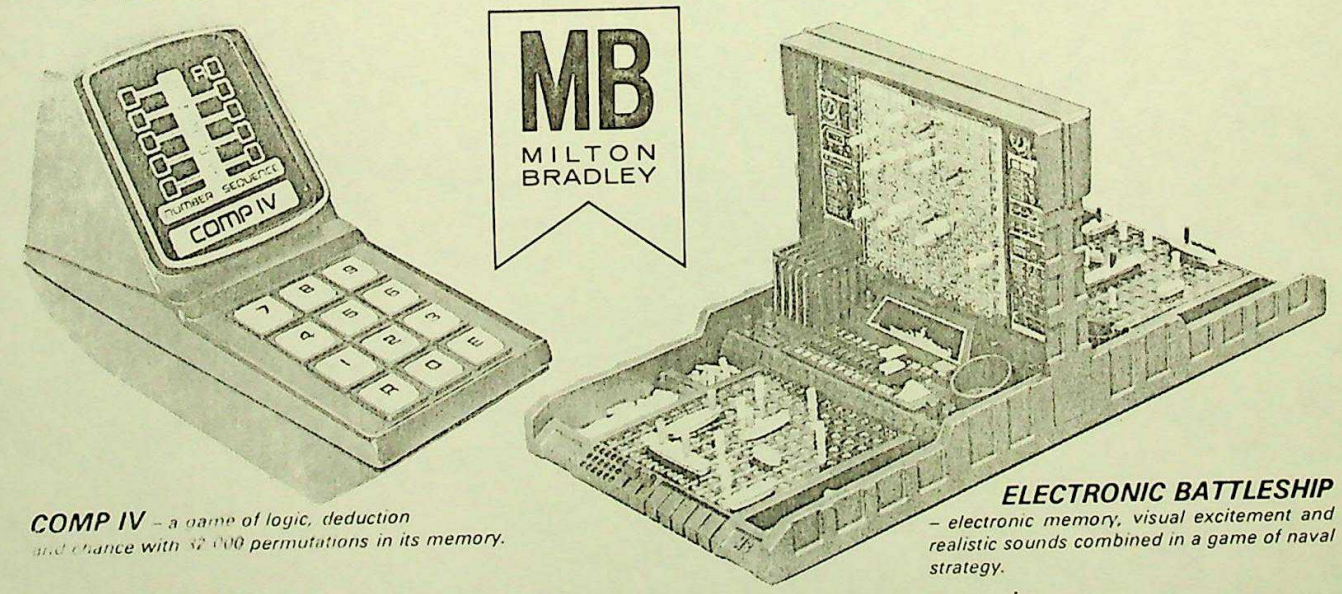

COMP IV *– a game of logic, deduction and chance with 32,000 permutations in its memory.*

ELECTRONIC BATTLESHIP *– electronic memory, visual excitement and realistic sounds combined in a game of naval strategy.*

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Circle 103 on Reader Service Card

273-1 E/GC AU 334 EX
11/15/77 XR 4,058,113

United States Patent [19] [11] **4,058,113**
Fields [45] **Nov. 15, 1977**

[54] **TIME PERCEPTION DEVICE**

[76] Inventor: **Louis G. Fields**, 11662 Sunset Blvd., Los Angeles, Calif. 90049

[21] Appl. No.: **631,472**

[22] Filed: **Nov. 13, 1975**

[51] **Int. Cl.**[2] **A61B 5/16**
[52] **U.S. Cl.** ..... **128/2 N**; 35/22 R; 273/1 E
[58] **Field of Search** ..... 128/2 N; 273/1 E; 35/22 R

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Fields, L. G., *Dig. of 7th Intern. Conf. on Med. & Biol. Enging.*, p. 494, 1967.

Weber, D. S., *Perceptual and Motor Skills*, 21: pp. 863–866, 1965.

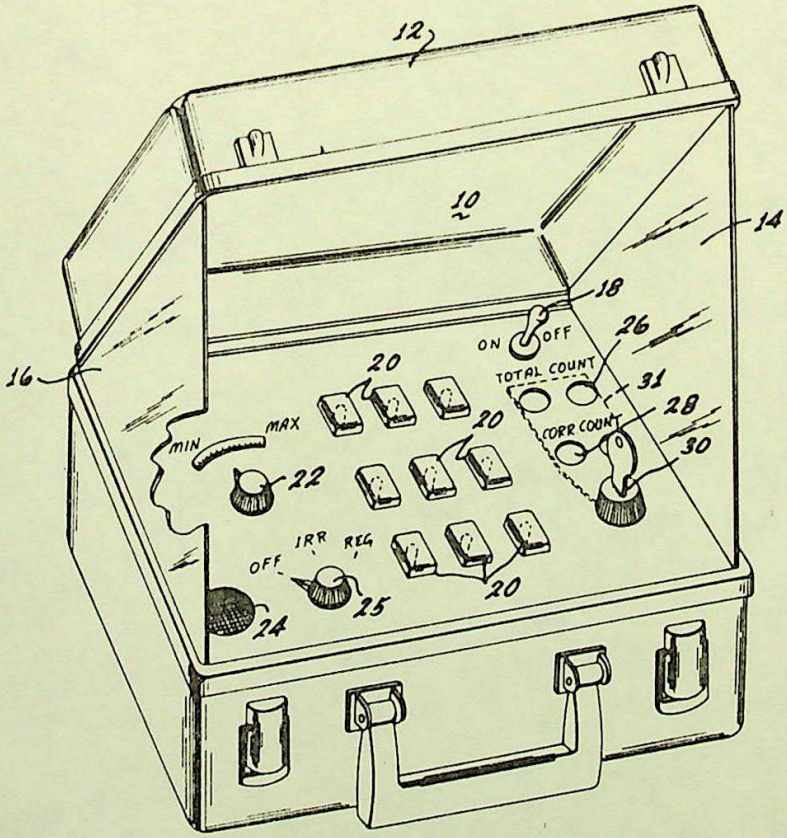
Primary Examiner—Kyle L. Howell
Attorney, Agent, or Firm—Charles H. Schwartz

[57] **ABSTRACT**

A time perception test instrument for performing a self-administered time perception test by a test subject, including a plurality of individual flashing lights arranged in an array and with all of the lights except one flashing intermittently at regular intervals and with one of the lights flashing at irregular intervals and with a plurality of test buttons corresponding in number to the flashing lights and with one test button associated with each flashing light to allow the test subject to select any individual one of the flashing lights judged by the test subject to be the light flashing at irregular intervals and with a random selector for randomly selecting one of the plurality of lights to flash at irregular intervals after each selection by the test subject. A coincidence detector produces a coincidence signal when the test subject selects a particular one of the flashing lights which is flashing at irregular intervals.

25 Claims, 3 Drawing Figures

VISUAL DISCRIMINATION



273
DIG. 28

1978

Electronic games

that amuse, challenge, and outwit you

copy in 273/85G

Inside these smart games, sophisticated microprocessors make them great adversaries

By BILL HAWKINS

I looked down at the small clear-plastic box in my hand. The tip of my finger covered one of the paper-thin squares loosely packed inside. "Each one of those silicon chips can hold up to 128,000 pieces of digital information," said Jim Muller, technical spokesman for Texas Instruments. "Newer ones we're working on will store over 256,000 bits."

Exotic parts for a sophisticated computer system? They could be, but in fact each was a typical component TI uses in one of its $50 word-teaching games for kids. And it is just one sample of the incredible microcircuitry used in today's electronic games.

The miniature size, flexibility, availability, and low cost of these circuits have drastically changed the game and toy industry. Electronic video-game pioneers such as Atari, Magnavox, Fairchild, and Coleco are now competing against the non-electronic- and board-game makers: Parker Brothers, Mattel, Marx, Mego, and Milton Bradley, to name a few.

There are video games that attach to your TV, using its screen for colorful graphic displays of

Continued

Microprocessor is the key ingredient to all these—and many more—electronic games. They can be programmed to play anything from checkers to "Simon."

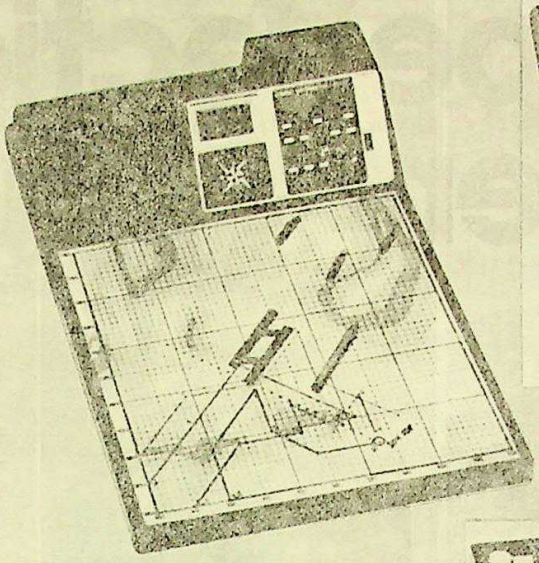
tennis, hockey, handball, practice, and two target games, the last with remote guns. On-screen scoring with sound effects are generated by the chips, as are color outputs for use with a color-generator circuit. It is this flexibility that has made the GI chips so attractive with such manufacturers as Magnavox, Lloyd's, Monteverdi, Venturi, Hanimex, etc. Simply jumpering or switching certain pins of the 28-pin IC adds as much complexity (and cost) to the final product as desired.

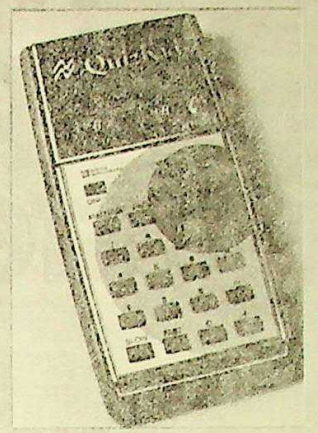
Speaking at last year's winter Consumer Electronics Show, Dr. E.A. Sack, Vice President for GI, stated that his company believes in the dedicated approach to microprocessor game designs. GI backed up this position by introducing its Gemini video game circuits that are capable of playing more than 50 different games. While some of the new chips allow a manufacturer to make stand-alone games that can be reprogrammed, others can be added to existing games that use the GI 8600 eight-game chip (tennis, hockey, soccer, squash, practice, gridball, basketball, and basketball practice). Using much of the 8699's video and player-control circuits and adding an 8603 chip, for example, the normal ball-type games can be transformed into a road race when game number 1 is selected on the control switch. The idea, of course, is to allow a manufacturer to upgrade his entire stock easily and relatively inexpensively simply by adding one IC chip.

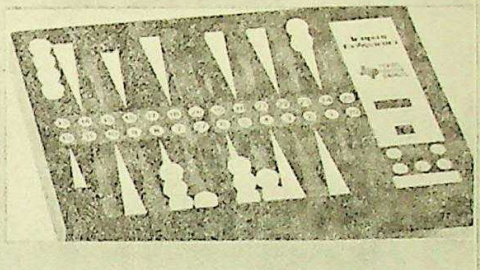
GI has just recently begun delivery of its AY-3-8700 single-chip tank game. This is a 28-pin IC package that provides 32 rotational angles of tank control for two players. Video outputs from the chip include left and right player tanks, shells, shell bursts, mines, fixed barriers, score, blanking, background, sync, and color-burst locator. Audio output circuitry is just as complete with tank-1 and tank-2 motor sounds, bearing and track squeals, and explosion and gun-fire envelopes. The chips are $9.95 each, but don't send in an order unless it is for 50,000 or more chips.

Microcomputers like Radio Shack's TRS-80 can be used to play video games or as educational tools.

MORE NONVIDEO GAMES







Three nonvideo games, clockwise from above: Parker Brothers' "Code Name: Sector," a microprocessor-based sub pursuit game; National Semiconductor's "Quiz Kid" calculator; and Texas Micro Games' "Computer Backgammon."

Among other companies in the electronic game business, APF Electronics has a broad line of video paddle games with two new additions—the Model 500 with 20 space-type games, including Space War, and an M1000 microprocessor programmable game at $149.95.

Sears, too, has increased its line of games, which begins at $20 and goes on up to a sophisticated programmable game that sells for $179.95 Sears' program library ranges from antiaircraft torpedo shooting to an outer-space game. Mid-priced dedicated games are available for other games like "Tank."

Microelectronic Systems' "Interact" is a joystick-and-keyboard-operated game that can be programmed by a *tape* system. Running at 810 bits/inch, the tapes set up the game to play Trail Blazers, Blackjack, or Regatta racing. You can also draw computerized color pictures on a TV screen. With a built-in cassette machine and alphanumeric keyboard input, it lists for $249.

Even though game manufacturers are now designing games for the home, office, and shirt pocket, this is just the beginning of a whole new era of gamesmanship. Datatime Corp. may be saying this with its new wristwatch, which gives time and date on a liquid-crystal display as well as allowing you to play Jackpot, Dive, and Roulette. A backlighted display on the $100 timepiece keeps you in action no matter what the hour.

Too, let us not overlook the home computer while we're exploring electronic games. Though computers are at the peak of the triangle in terms of numbers expected to be sold this year (owing to higher costs), a myriad of fun games can be played on a TV screen if you have your own computer. There are more possibilities, in fact, than any programmable-type video game has because you can create your own game programs as well as having access to an overwhelming amount of game software and written programs.

In spite of predictions in numbers and dollars for the future of electronic games, perhaps their real interest for all of us was best expressed by Nolan Bushnell, Chairman of Atari: "Only after you've experienced the sheer joy of slaughtering your best friend will you know the true meaning of fun." ◇

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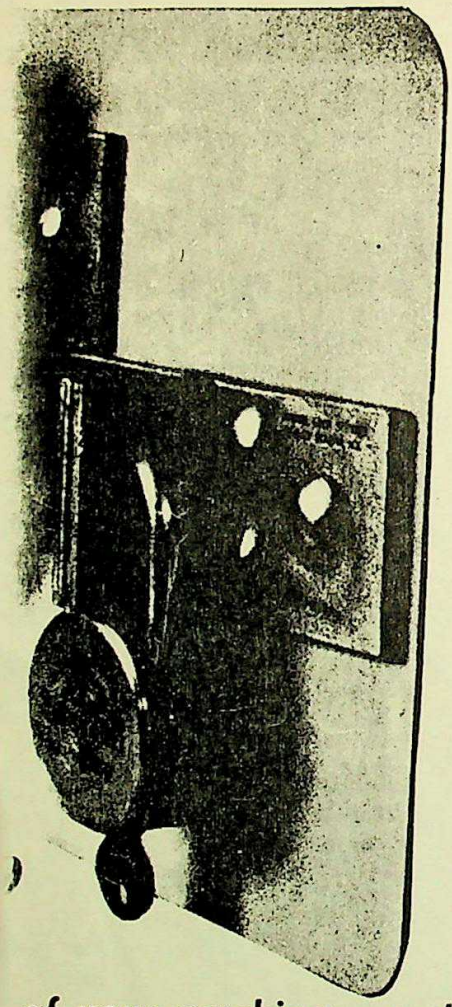

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VENDING TIMES
JANUARY 1979 p. 60

player exactly what is happening at any given time during game play.

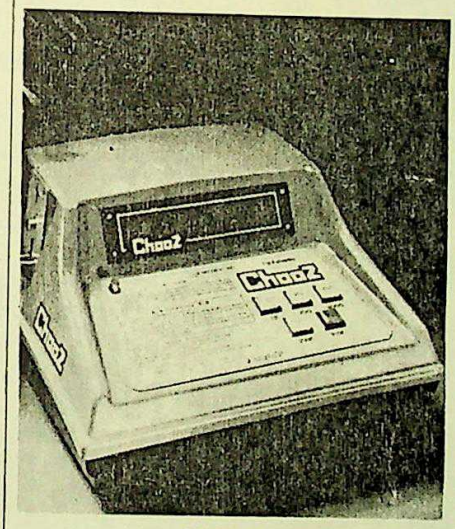
The firm explains that "for strategic players, the 'Middle Flashing Number' repeats in a sequence. As the middle numbers 'Flashing' speed slows down, the player may note where their desired number appears in the sequence, and press the stop button when the number is between the machine's two selected numbers. The excitement mounts when the flashing number speeds up, at higher print levels."

When the game is not being played, the game shows a Banorama Display, which is described by the firm as "a smoothly moving banner message, as well as a melodious sound at the end of each message. The tone may be turned off by a rear switch when desired."

The unit also incorporates a locked vault door on the coin box, an anti-theft security fastener, a small light on the front panel which enables the customers to easily read the game instructions, a coin mechanism which is adjustable to a wide variety of the world's coins, and all three electronics modules are plugged into connectors, permitting ease of isolation of module malfunctions.

Each time the game is turned on, it performs a self-test check of the system's major components, simplifying and shortening service time by "Telling" the technician of any complications.

Further information may be obtained by writing to Computer Kinetics, 31129 Via Collins, Building 701, Westlake Village, Calif. 91361.



CHOOZ

Allied Leisure Offers Space Chip Video Unit

HIALEAH, Fla. — Allied Leisure Industries Inc. is marketing its Space Chip video game.

The unit features two goal areas for scoring, solid state computer controlled electronics, adjustable bonus scores and durable construction. The unit also incorporates sound effects. The game is 24" wide x 29-1/2" deep x 76" high.

Further information is available at all Allied Leisure distributors. The firm is located at 245 West 74th Place, Hialeah, Fla. 33014.

F-33 PLAYTHINGS JAN. 1979

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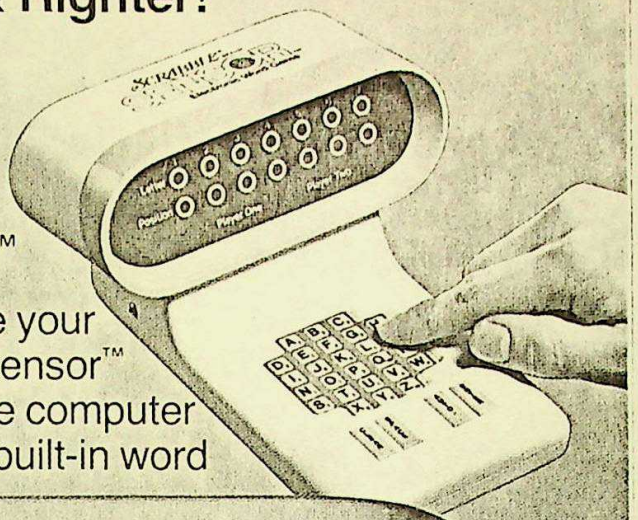

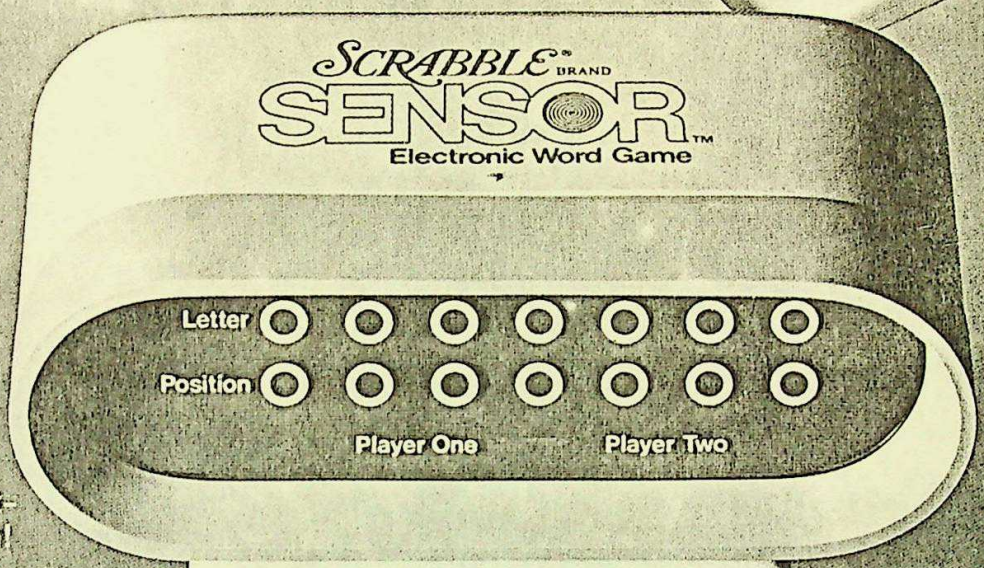

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Battery-operated—play it anywhere!
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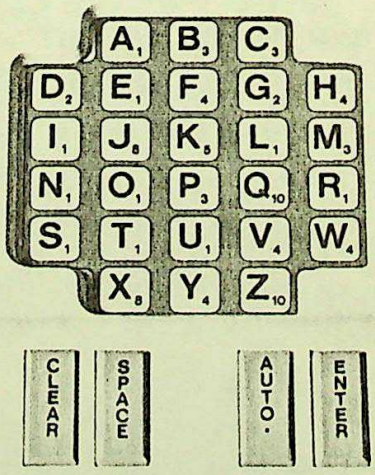

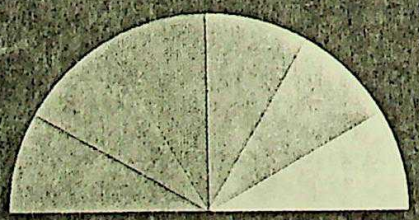

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PLAYTHINGS, FEB. 1979

P. 275

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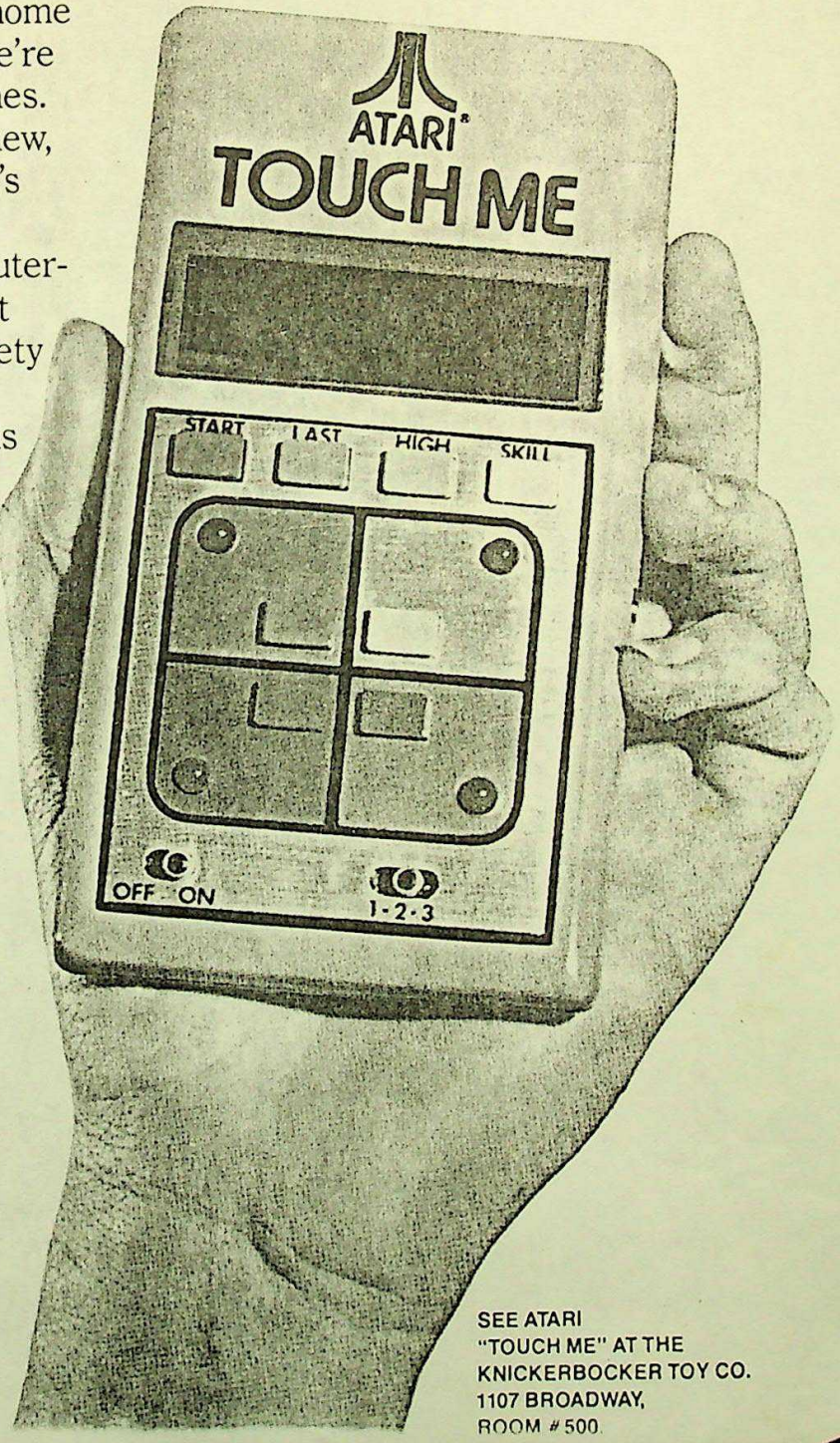
"Touch Me" is a brain-teasing, computerized test of memory and coordination that captivates players from 7 to 70. The variety and excitement are built in, with three different games for 1-4 players, four levels of skill, plus color and sound.

Now there's no need to take chances with manufacturers who are just getting into electronic toys. Because with Atari, you get the leading name in the field. Built-in consumer acceptance. Quality and reliability to minimize problems with returns. National advertising support. Plus the great, proven games that only Atari can deliver.

Come to the Knickerbocker showroom at the Toy Fair and see for yourself: when it comes to electronics in toys, Atari has the Golden Touch.



ATARI®

A Warner Communications Company

ATARI,® INC. Electronic Toys & Games
Consumer Division
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(408) 745-2886

SEE ATARI
"TOUCH ME" AT THE
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o and a Mustang operated by
s and featuring prompt throt-
ponse and quick cornering.
ird car, a tenance van is self-
ed and moves at a constant
n either lane.

x offers six new electronic
Entex hand-held electronic
can be played by more than
ayer at the same time or
the computer. Some feature
onal remote control. Subjects
baseball, road racing, space
nd soccer. The electronic Dan
a word-recognition toy. The
sponds to specific commands
"go," "stop," "turn right,"
left". In Entex' electronic
War game players try to
opponents' base ship or fleet
ighters.

mputer tests players

e games mark Ideal's entry
e electronics field. Electronic
ive's computer brain can
130,000 different crimes and
ayer grills the computer to ob-
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is an audio-visual game in
players are matched against a
ter which tests their listening
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me, is a UFO that players try
rm by trying to fit the plugs
e right holes.

ta introduces three electronic
s of Mastermind. Electronic
rmind using a single chip
processor and two printed cir-
ets players choose among nine
te games at three levels of dif-
Walt Disney MasterMind is
er three-hole version in which
characters search for their
friends. MasterMind 44 uses
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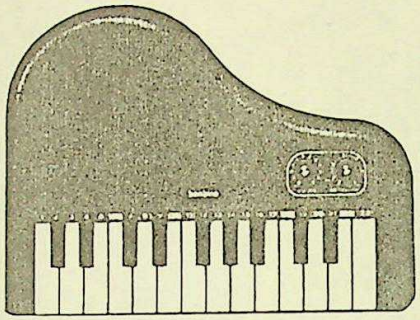
thereby allowing up to four
at a time to play.

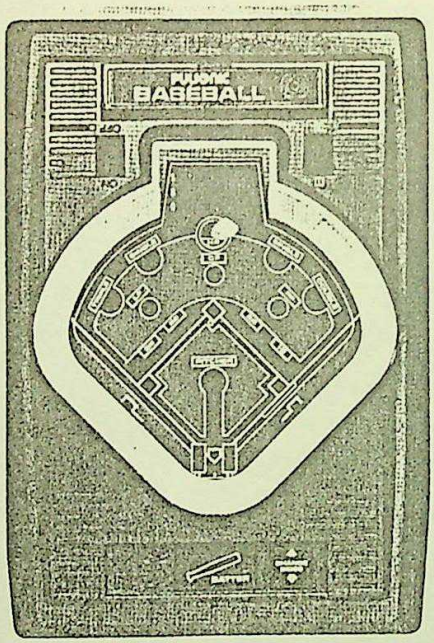
mchair sports debut

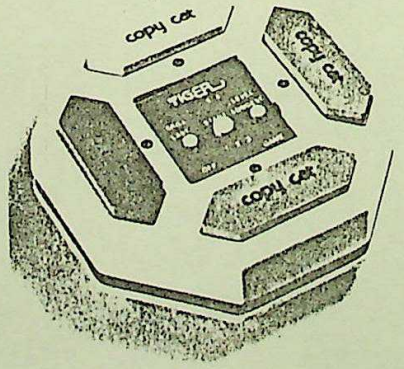
o lets armchair athletes play
innings or nine holes with
ic Electronic Baseball or
ic Electronic Golf. Baseball
s a manual pitching console
osing fast ball, slow ball, right
t curve, and automatically
rs balls, strikes, outs and runs.
ic Golf recreates all the play-
ing features of a nine-hole golf course including water and sand traps.

Atari is adding new game program cartridges to its video computer library. Computer sports games include Football, Miniature Golf, and Bowling. Slot Machine simulates a Vegas gambling machine. In Human Cannonball players shoot a man out of the cannon and into the water tower, and in Canyon Bomber players drop bombs from a plane into the canyon. In Sky Diver players release their Sky-Diver from an airplane. The Casino computer

continued on page 54







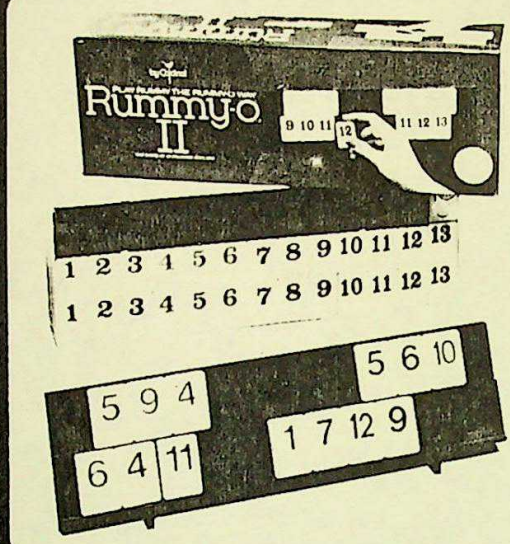
TOP — Left: Bambino's 23 key Classic Tones Deluxe Electronic Organ with Metronome has true tone and perfect pitch. Right: Invicta's single chip Electric MasterMind lets players try nine games at three levels of difficulty. CENTER — Left: Mego's Pulsonic Electronic Baseball features a pitcher, a batter, and players who can run around bases. Right — Ideal's Maniac tests children's listening, seeing, and musical abilities with notes, patterns, and melodies. BOTTOM — Tiger's Copy Cat also sharpens children's sight and hearing by challenging them to match lights and sounds with each turn getting more complex and faster.

PLAYTHINGS 3/79

games for 1979

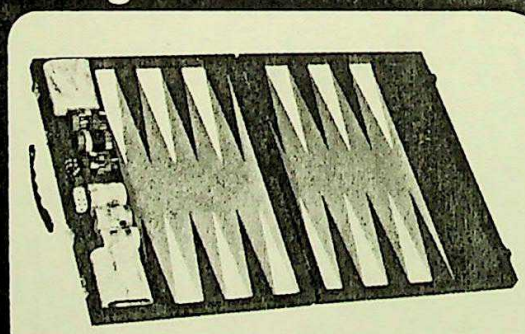
by Cardinal

Rummy-O



Rummy-O in 3 price ranges.
The best selling new game in the country

Backgammon



The largest assortment of backgammon sets in the country Magnetic, vinyl, corduroy, suede, leather, etc.

We have a complete line of adult games.
Ask for our new 1979 catalogue.

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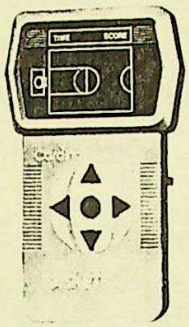
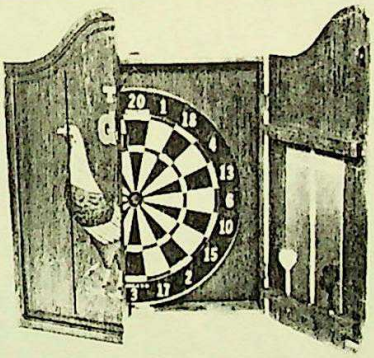
Showroom: 200 Fifth Avenue/Room 222

Electronic Games



Electronic hand held games: Football and basketball available for immediate delivery.

Dart Cabinets



"Olde English" style dart cabinets with board and darts. Several designs available.

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For More Info on Stanzel (Circle No. 30 on Reader

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Order while supplies last.

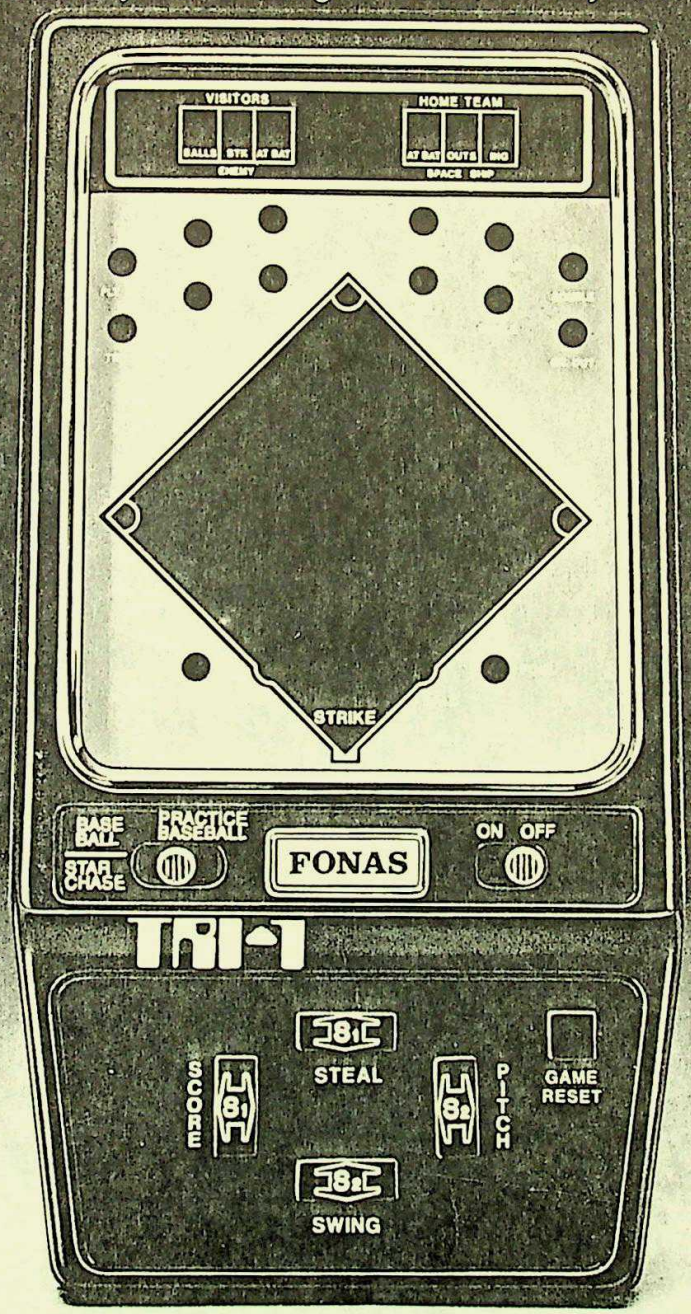
NEW TRI-1 3 GAMES IN ONE.

Baseball. Batting Practice. Star Chase.

Tri-1 is the most playable hand-held electronic game yet. It's the only one that lets 'em steal a base, make a double play, keep continuous score. And when they're done hitting balls, they can try to hit enemy starships. All ages can play, alone or with a friend.

They'll see that Tri-1's more fun, right off the bat. Supported by high impact packaging, a hefty TV schedule, competitive pricing. See your Fonas representative for details on Tri-1 or the other quality Fonas products – Spiral Passer, Johnny Bench Batter-Up, Zimm Zamm, Tee Ball and Struts. Or call or write Fonas Corporation at P.O. Box 759, Latrobe Industrial Park, Latrobe, Pennsylvania 15650, (412) 539-4571.

FONAS The Good Sports



TRI-1. THE BEST GAME IN AMERICA AND THE UNIVERSE.

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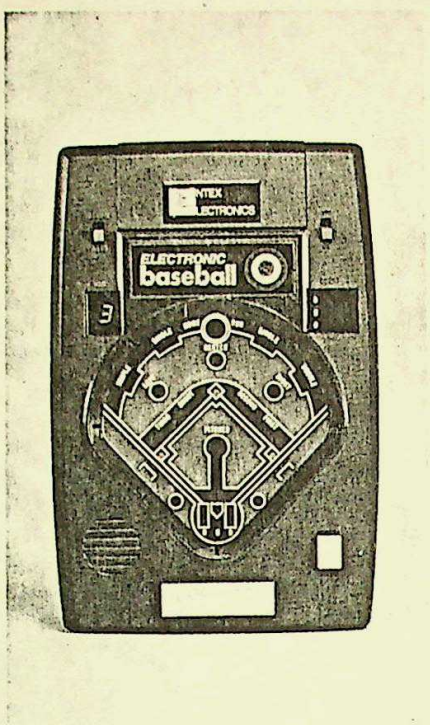
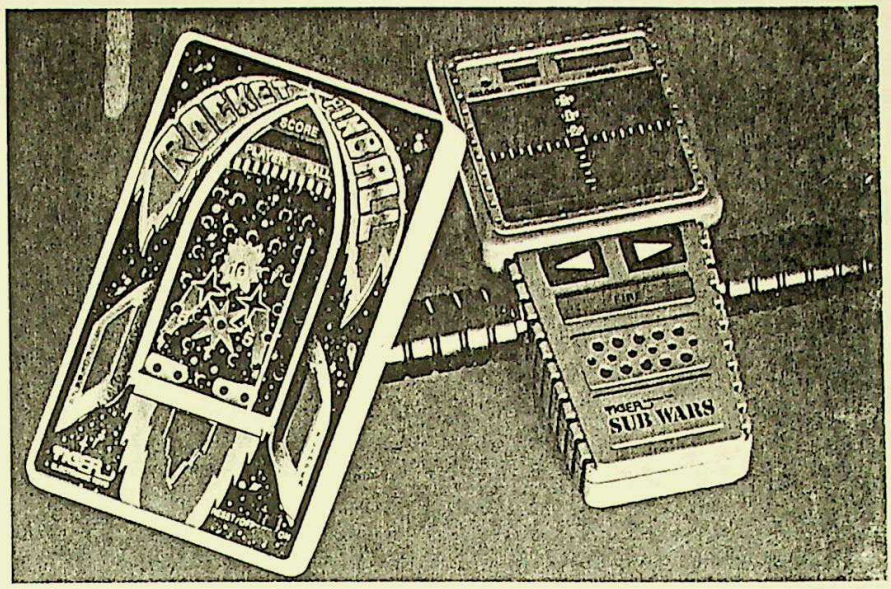
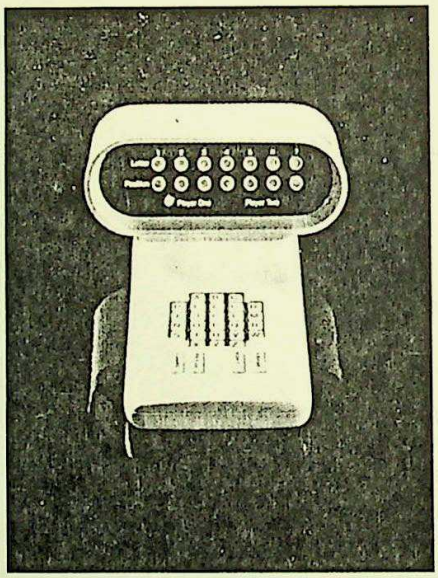
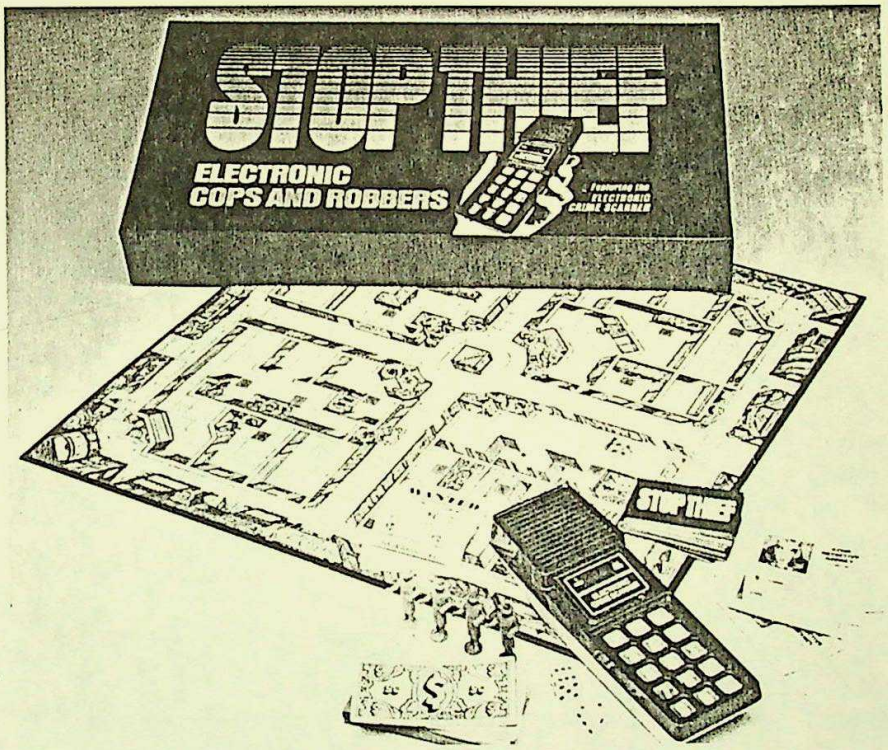
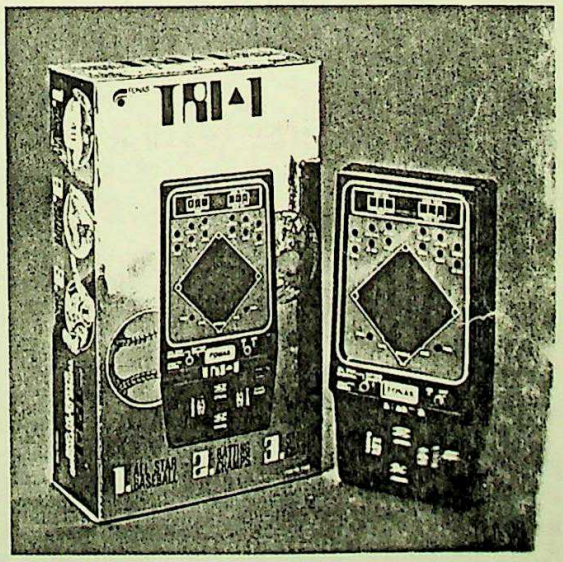
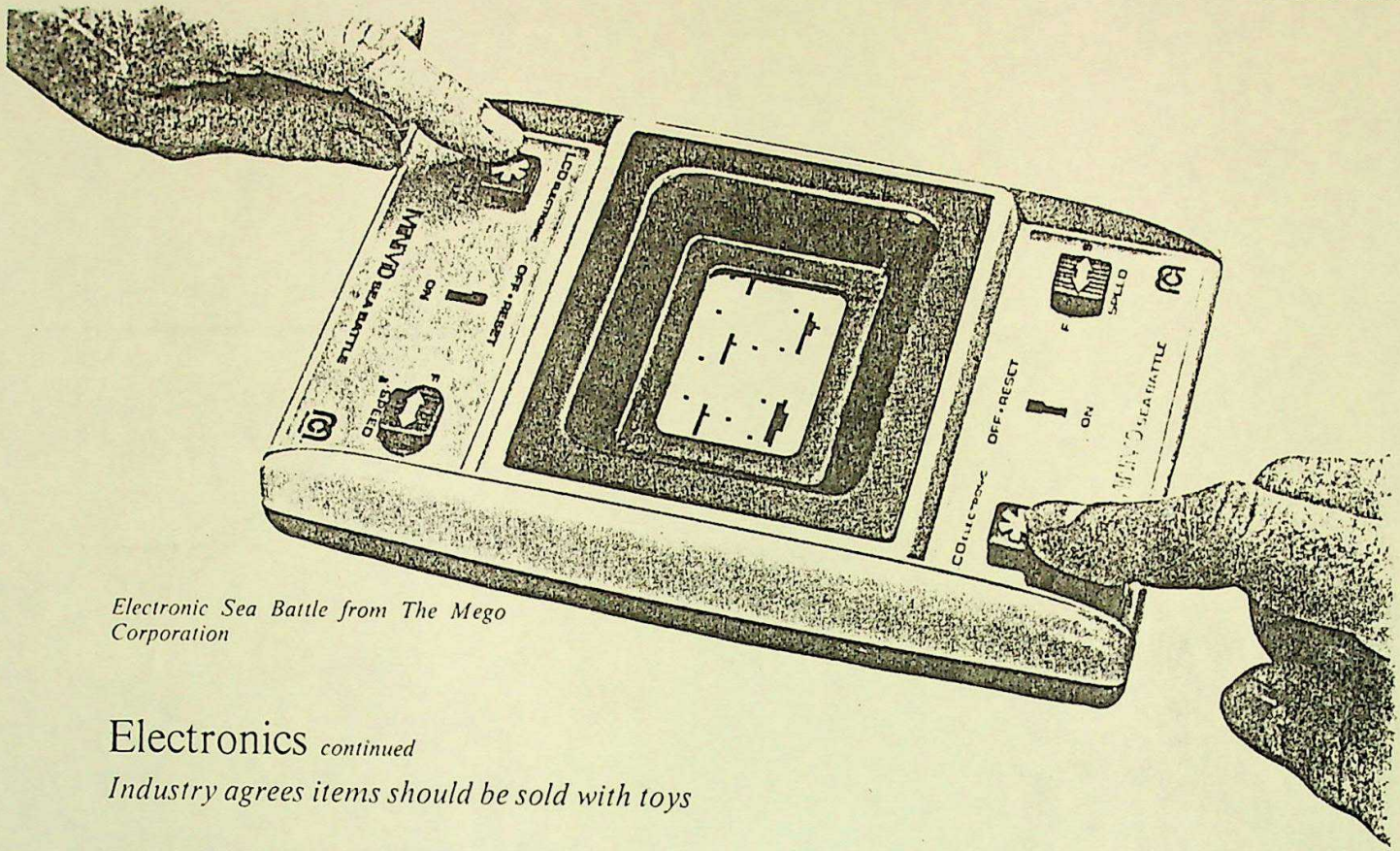












Electronic Sea Battle from The Mego Corporation

Electronics *continued*

Industry agrees items should be sold with toys

manufacturers, have taken this step in the full knowledge that electronics are not just a Christmas category; they have quickly established themselves in the marketplace as year-round sellers.

Nick Underhill of Entex clearly sees a place for electronics in the store throughout the year.

"Electronics are a staple at this point," the Entex executive comments. "Electronic baseball and football games will always be around, they'll just keep improving each year."

Scott McWhinnie, vice-president of marketing at Schaper Manufacturing, feels that the process through which the electronic category must necessarily pass to become a staple is still in the evolutionary process.

"They will stabilize — I don't know in how many years — into staples. Like any hot category, there is a life cycle of so many years, after which the market gets glutted and plateaus off," opines McWhinnie.

Toy department goods

At the retail end, the manufacturers were in almost complete agreement that electronics toys and games should remain in toy departments — electronic preschool in the preschool section, electronic sci-fi items together with that general category, electronic vehicles with other ride-ems.

In looking at the question of how to merchandise electronics, Stan Harfenist, vice-president of sales and marketing at Knickerbocker Toy, remarks that "most electronics toys can be put in with other toy categories. Only big electronics such as arcade ones — bowling, pinball — should have their own separate category."

Harfenist also tackles the other part of the retail question: once a retailer decides where to put these products, he then faces the question of how does he best sell them to his customers.

"The most effective sales methods," says Harfenist, "are television, point-of-sales demonstrations, special promotional fliers, and catalogues just for electronics."

Skip Marson, president of Leisure Dynamics, adds: "Educate people about electronics toys through television. Point-of-purchase display units are also important."

Lakeside Games, a division of Leisure Dynamics, won an award for the display unit it has designed to sell the firm's electronic products.

Marson, explains that the unit is animated and familiarizes customers with the Lakeside Game line, although it does not actually have a playing capability.

Norman Sas, president of Tudor Games, sees working models also as an important part of the total sale picture — "People want to know what they are buying."

The current headache of steeply spiraling prices has presented another kind of challenge to the manufacturers this year. The plastics category has been particularly hard-hit and everyone is worrying out loud about what will happen between now and Christmas. The fact that this situation is playing against such global dramas as the one that has been unfolding in Iran, whose slowdown in oil shipments has been one of the main reasons for the cost increases on petrol-based products, makes it all the more difficult to come up with any foreseeable solution.

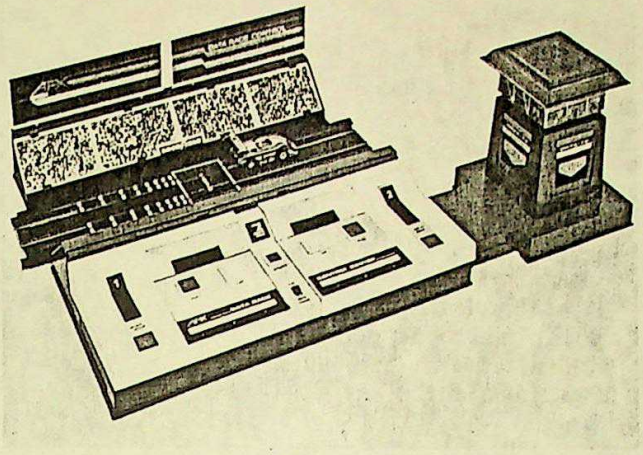
Shortages foreseen

Since the Iranian catastrophe has been sometime in coming, some of the manufacturers were able to forecast their predicament — and planned accordingly.

Comments George Dittomassi of Milton Bradley: "We had projected the cost increases and adjusted the price structure to accommodate this problem."

Tom Pearcey, sales manager of Logix, says that he does not foresee

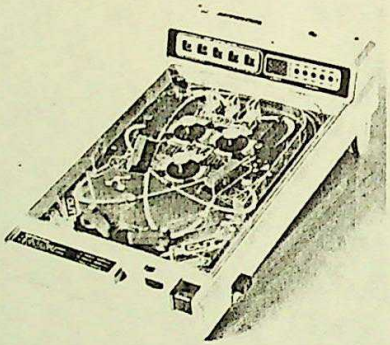
Speak & Spell from Texas Instruments offers fun with words to young and old alike.



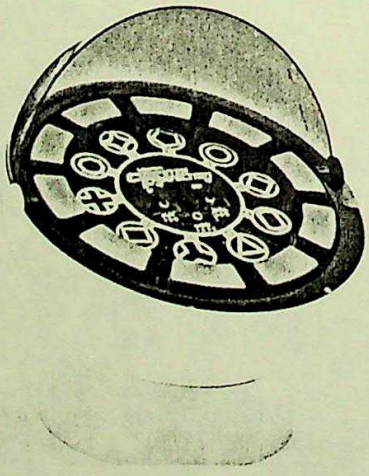
The AFX Data Race Computer Center from Aurora can program races, refuel cars, and has the sounds of racing.

Electronics *continued*

Manufacturers air pros and cons of outside firms entering toy field



The Atomic Arcade Pinball Ball from Tomy is propelled like an atomic particle into an atom. It caroms off the power bumpers as if it were in a magnetic field.



Lakeside's Computer Perfection is an electronic challenge of mind and memory. Four different electronic games and skills levels allow players to challenge the computer or compete with friends.

Everyone in electronics is openly delighted that an entirely new market has been created by the electronic toy and game category.

Stan Herman, manager of creative services at Aurora, recently acquired by the Marx organization, declares that "There are two markets actually — hobby and mass merchants. In the hobby shops, they tend to have electronics in a showcase where people have to ask for it as they would a watch or a hand calculator. But in the mass-merchandising stores, they are not generally displayed individually. They're displayed on a gondola on the floor."

Herman goes on to say that the electronics customer is "very brand conscious . . . we have brand-loyal customers. Aurora has a high percentage of awareness. Our major promotional TV campaign has also helped us at the point-of-purchase."

New firms in toys

In surveying manufacturers for this report, the matter of the entry into the toy market by traditional electronics firms came up time and time again. Both electronics firms and toy companies looked at this trend, sometimes positively, sometimes not.

"Most companies do not perceive us as competitors," Jim Muller of Texas Instruments comments. "One reason we do not seem to pose a threat is that our circuit supplying division is quite separate from our consumer products division."

He explains that TI is divided into several groups: the consumer products group, making watches and calculators. This group is located in Lubbock, Texas; the semi-conductor division, making circuits, which is located in Dallas. A subdivision of the semi-conductor division is the microprocessor division, located in Houston.

Roger Shiffman of Tiger Electronics says that General electronics companies may have a strong product, but their biggest problem may be in the area of marketing these items because "they still don't know how to sell to the toy market."

Although Tiger's parent company is a general electronics company, Shiffman himself as well as other key personnel have toy backgrounds, which gives them the distinct advantage of being able to combine toy marketing expertise with the parent firm's technological resources

Nick Underhill of Entex disagrees with those who think electronics firms can make an easy transition from calculators and watches to toys

Underhill remarks that "We have the expertise in the toy field; they do not. This type of switch from being a supplier to a manufacturer worked easily in the watch and calculator field. But it is difficult in the toy industry. We are a fashion industry with new concepts that are constantly changing."

Skip Marson of Leisure Dynamics says toy firms understand the business better than the newcomers.

continued on page 32

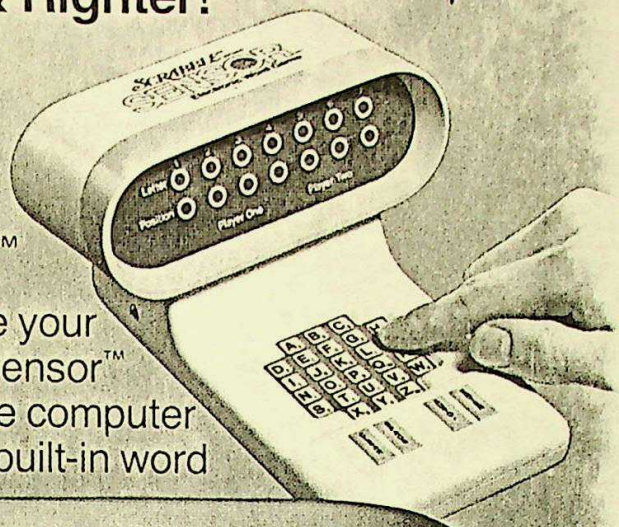
PLAYTHINGS, APRIL 1979
P. 31

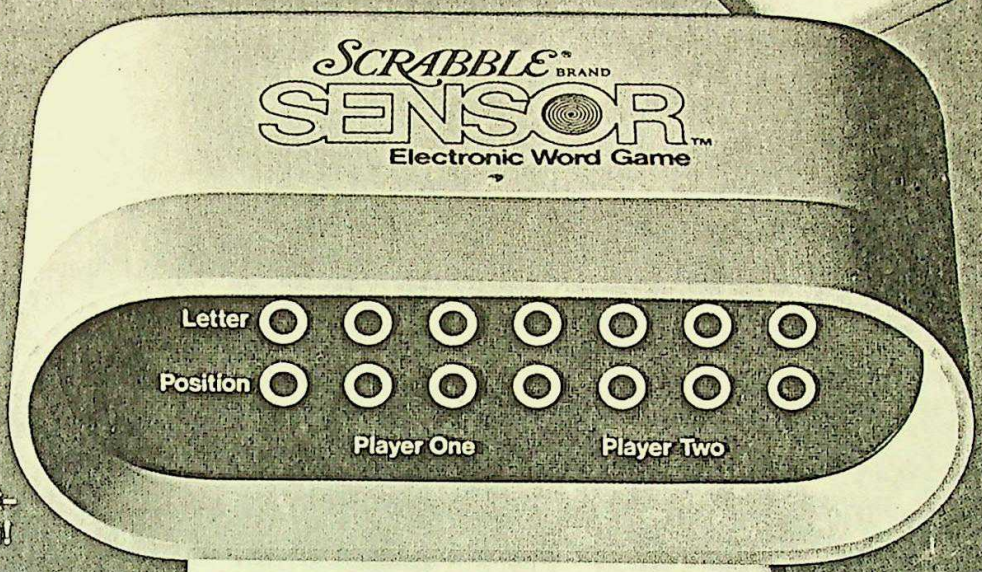
New from Selchow & Righter!

SCRABBLE® BRAND SENSOR™

Electronic Word Game

Punch in your hidden word and watch while your opponent tries to outsmart you, using the Sensor™ electronic brain! Or play it alone, against the computer —matching your wits against the Sensor™ built-in word bank. It's fun for everyone. A sure winner. Don't miss out.

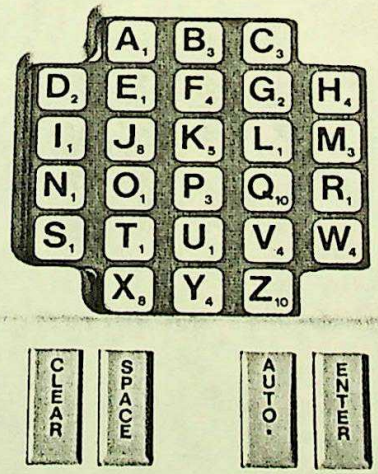


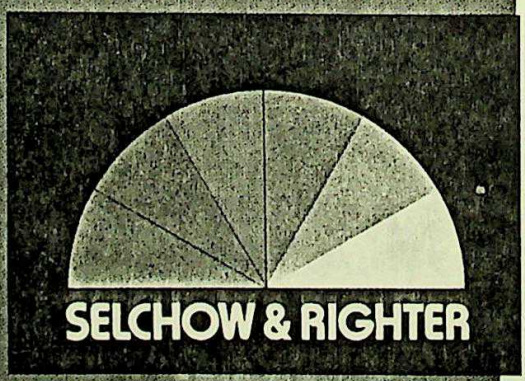


Heavy advertising support—including television!

Battery-operated—play it anywhere!
(Battery not included.)

From the company that brings you other big winners—SCRABBLE® brand word games.





Another name for fun and games.

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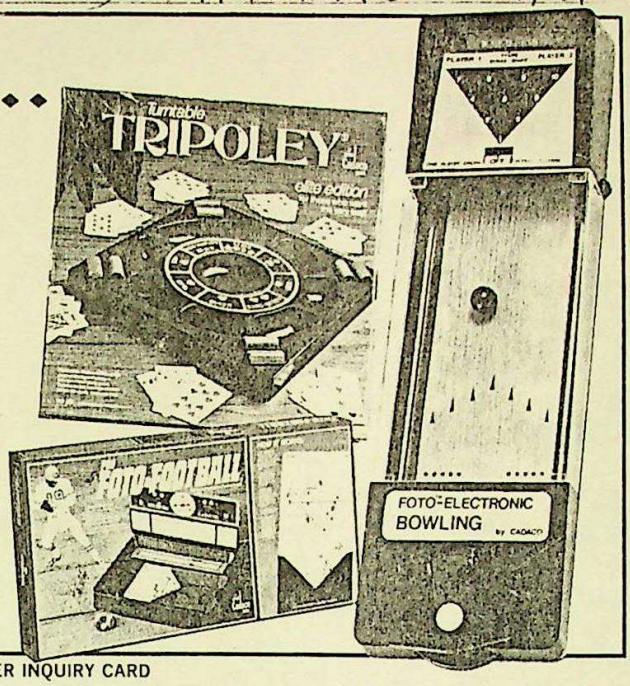
And Many More Great Cadaco Games!



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Bradley Co Milton
Brechner Dan & Co (Fleetwood toy Co)
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Cardinal Industries Inc
Cheong-Leen H & Co Hong Kong Ltd
Classic Games Co Inc
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Inside Front Cover

T, H & C MAY 1979
PAGE 1

IN 1979 MEGO® TAKES A SUPER IDEA AND SHRINKS IT.

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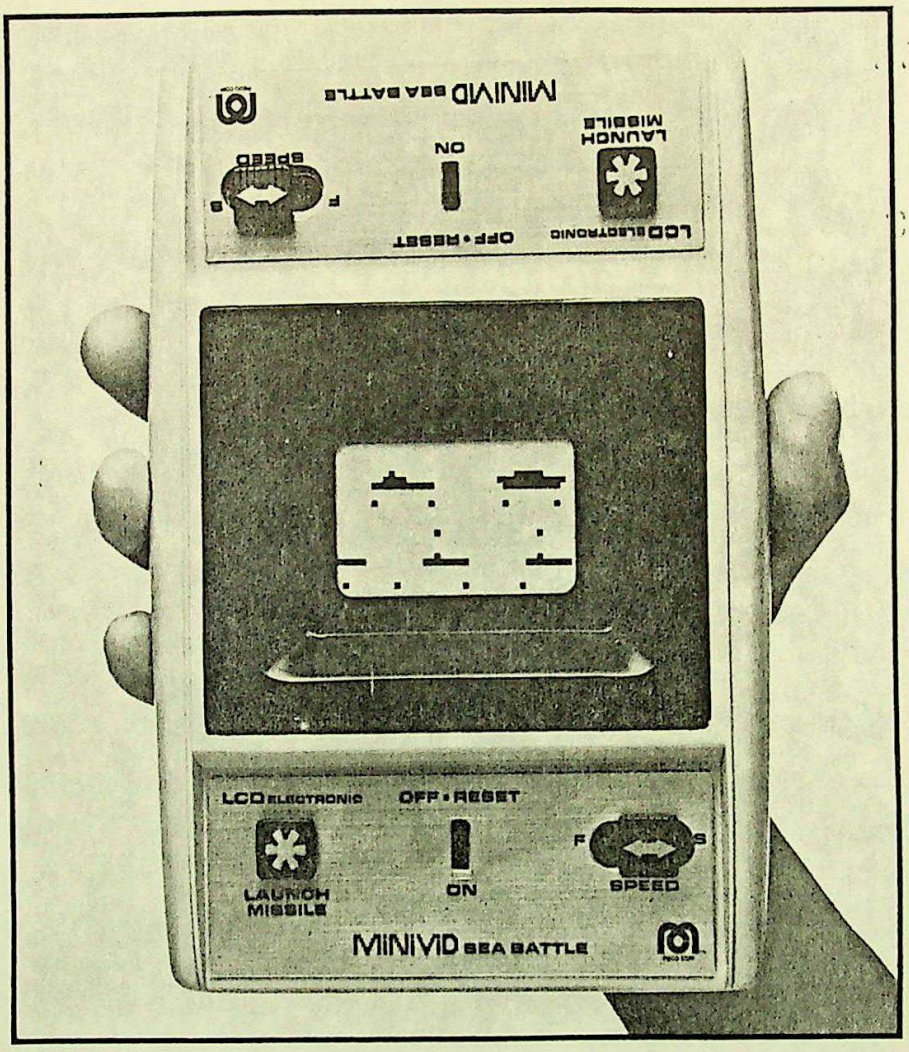

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They put video game technology in the palm of your hand.

The revolution is on in hand-held games and Mego® is leading the way with its revolutionary line of Minivid games. These 6" x 4" games bring all the action of full-sized TV video games into the palm of your hand.

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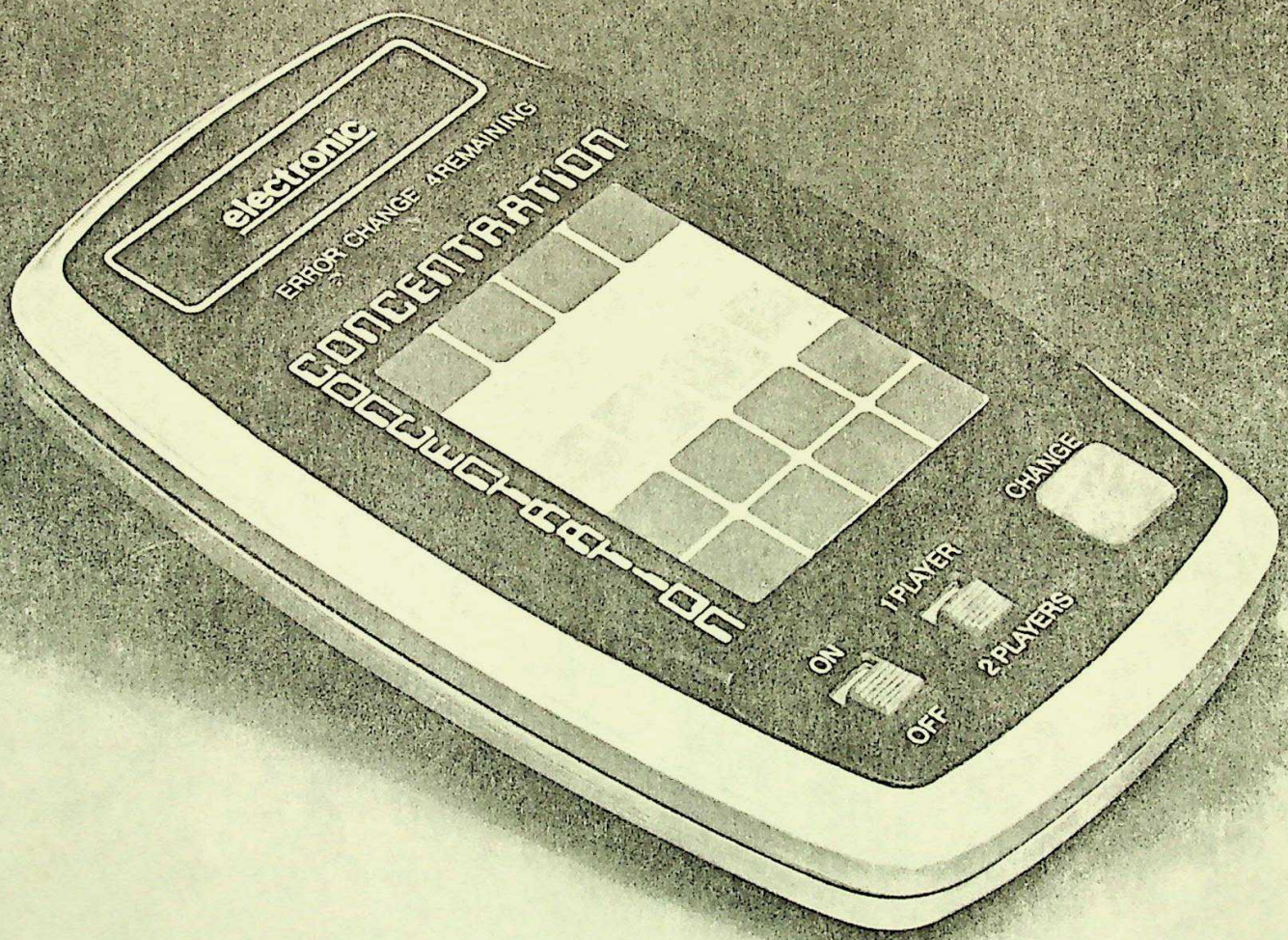
LJN's mid-year introduction:

ELECTRONIC CONCENTRATION

the computer game of matching numbers



An electronic challenge that can be played solo or against a friend. Requiring memory and concentration to match color spots of equivalent value. Color spot value will change location with every game through the marvel of electronic circuitry. First shipment August 1979. For more details see your friendly neighborhood LJN salesman or representative (but don't wait too long).

PLAYTHINGS July 1979
p. 6

LJN Toys, NY NY 10010

(Circle No. 20 on Reader Inquiry Card)

United States Patent [19]

Chang et al.

[11] **4,162,792**

[45] **Jul. 31, 1979**

[54] OBSTACLE GAME

[75] Inventors: Richard S. Chang, Rolling Hills Estates; George J. Klose, Redondo Beach, both of Calif.

[73] Assignee: Mattel, Inc., Hawthorne, Calif.

[21] Appl. No.: 758,605

[22] Filed: Jan. 12, 1977

[51] Int. Cl.[2] A63F 9/00; A63F 9/14

[52] U.S. Cl. ..... 273/85 G; 273/86 B

[58] Field of Search ..... 273/1 E, 85 R, 86 B, 273/130 AB, 131 A, 134 A, 135 A, 136 A, DIG. 28, 1, 85, 86, 130, 131, 134, 135, 136; 235/92 GA

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Popular Electronics; "Build Pontronics"; Apr., 1976; pp. 35–44.

101 Basic Computer Games; Digital Equipment Corp.; Mar. 1975; pp. 67–71.

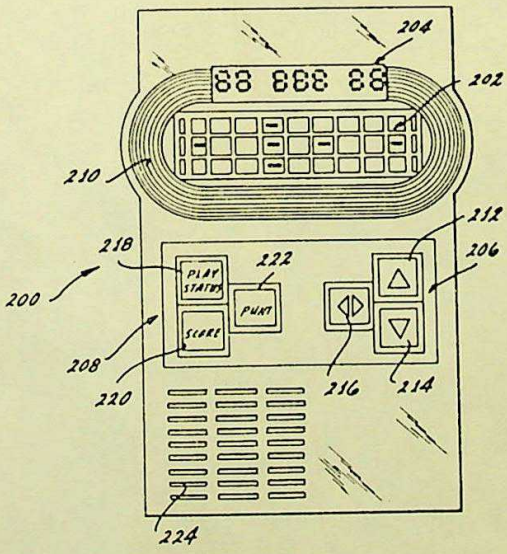
Primary Examiner—Vance Y. Hum

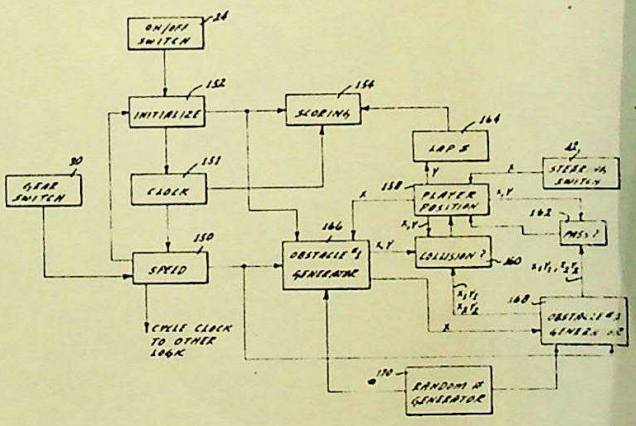
Attorney, Agent, or Firm—John G. Mesaros; Ronald M. Goldman; Max E. Shirk

[57] **ABSTRACT**

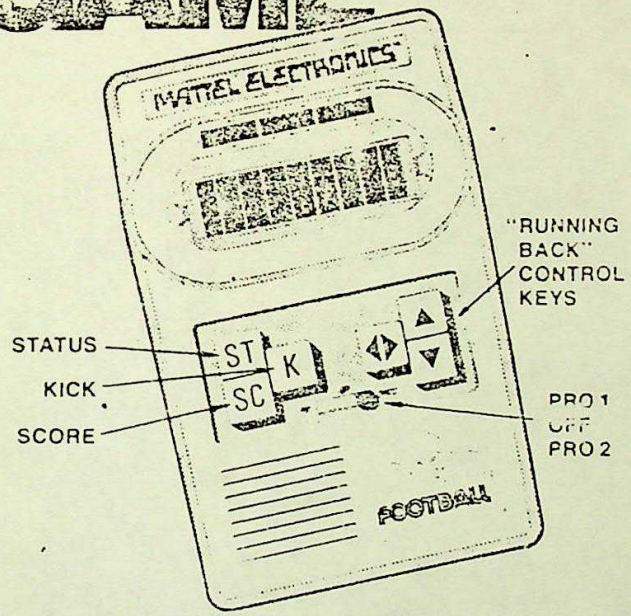
A novel game is disclosed featuring a playing field having at least three lanes and divided into at least six rungs. A gamepiece representing the player may be positioned in any one of the three lanes and is free to move in a first direction from one rung to the next; randomly generated obstacles advance in the opposite direction from rung to rung; the object of the game is for the player to avoid collision with the obstacle or obstacles. Two embodiments of the game are disclosed, the first simulating an automobile race course wherein the player's playing piece represents an automobile in motion and the obstacles represent competitors' cars being passed, in which case the object of the game is to pass a predetermined number of obstacles; and a second embodiment simulating a football playing field, wherein the player's piece represents the running back of the offensive team and the obstacles represent defensive tackles advancing towards the running back, in which case the object is to advance the ball the greatest possible number of yards and eventually score the maximum number of touchdowns. On account of the nature of the present invention, it is possible to implement it electronically with an inexpensive digital display having a relatively low number of discrete display elements.

8 Claims, 7 Drawing Figures





MATTEL ELECTRONICS™ FOOTBALL GAME INSTRUCTIONS



- *The competition of real football*
- *The skill of real play*
- *The latest micro-electronics*
- *The most challenging football game yet*

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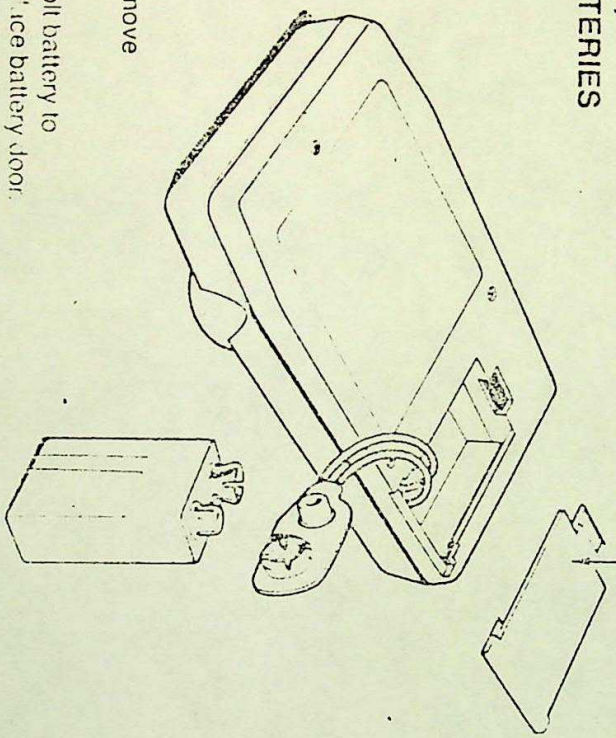
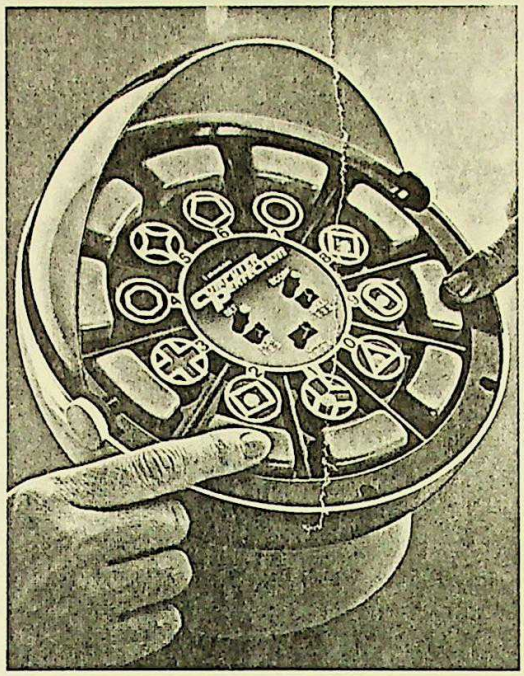
HOW TO PUT IN THE BATTERIES



Turn Electronic Football over, face down. Remove battery door.

Attach one 9-volt battery to connector. Replace battery door.

TOYS HOBBIES & CRAFTS
AUGUST 1979
BACK COVER



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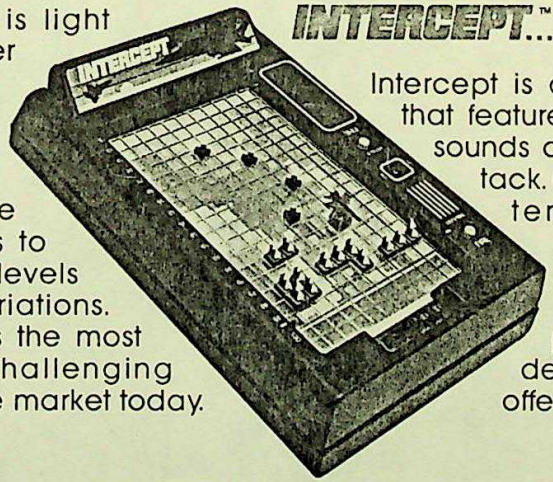

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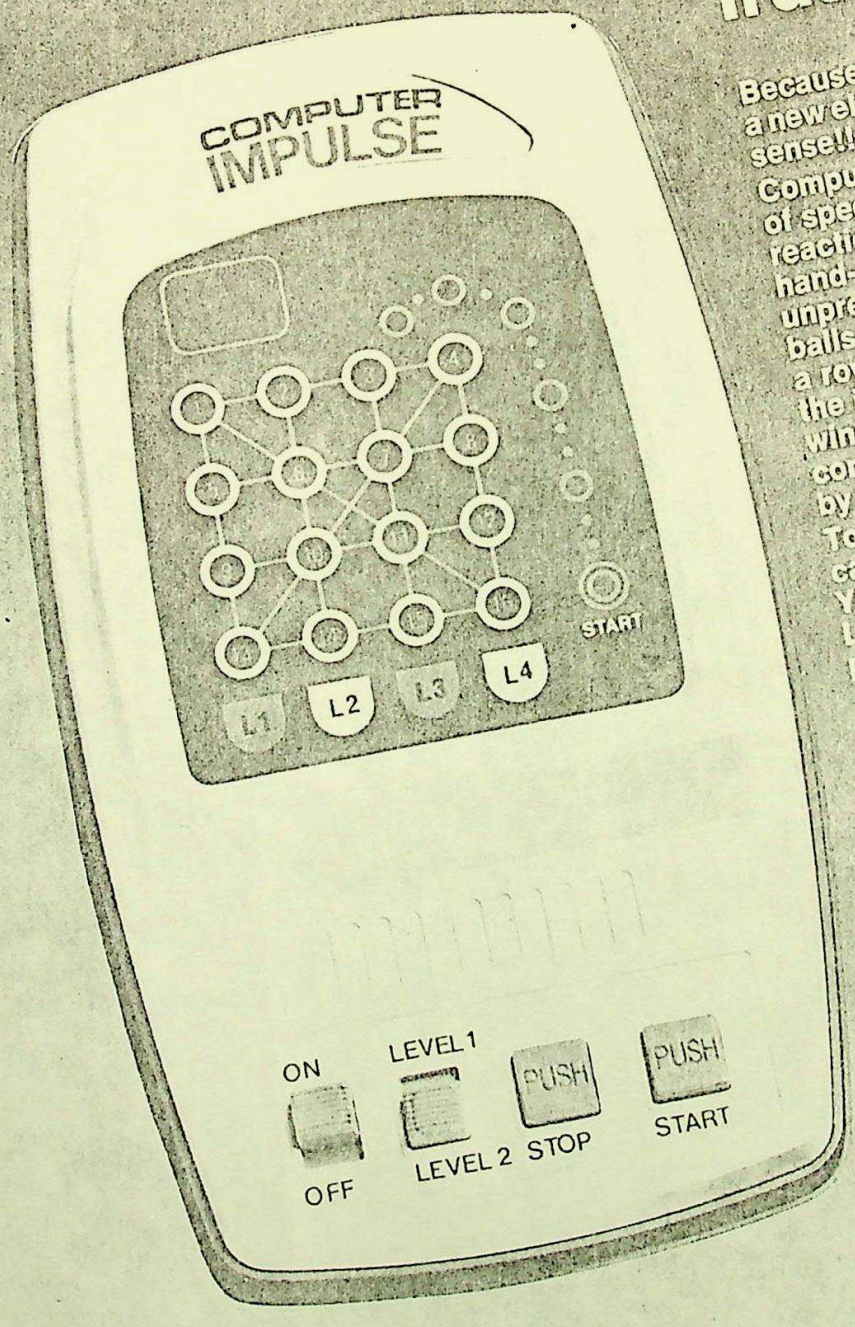

Because a good game play in a new electronic format makes sense!!!

Computer IMPULSE™ is a game of speed and split second reaction. It challenges your hand-eye skills by freezing the unpredictable bouncing light balls to create lines of four in a row. Your "turns" appear on the illuminated count down window and your "score" is computed and kept in memory by "chip circuitry".

To get in on the action THIS fall, call Jack Mason at LJN, New York, 800-221-8474 or see your LJN "locals".

First deliveries October 1979.

LJN Sales Force:

Murray Bass
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Andy Greenstein
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Sullivan, Cohen & Assoc.
214-741-2975

Walter White & Assoc., Inc.
402-339-2314

LJN
N.Y.C., NY 10010

T, H+C SEPT. 1979
P. 2

Computer Kinetics Corp. Introduces Draw 5 Game

WESTLAKE VILLAGE, Calif. – Computer Kinetics Corp. has gone into production on their latest coin-op, counter top amusement game, Draw 5.

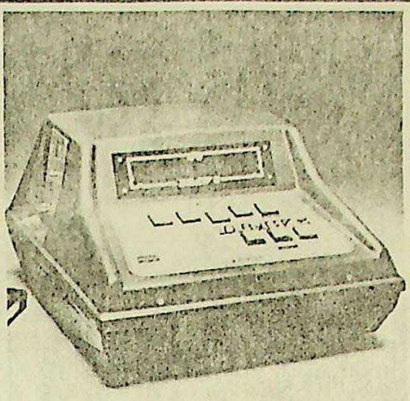
Draw 5, the company explained, "is a five card draw poker game for one or two players. The game has five discard buttons to give players the option of discarding any or all cards dealt. Draw 5 has a high game feature that allows the machine to be promoted on location. It has a cancel button to recover discarded cards, and a score button to display scores of all players in the game. After each game is over, the players final score can be recalled."

Draw 5's cabinet is bright red and black in color and is 17" wide x 17" deep x 9-1/2" high. It incorporates a built-in security fastener which permits the machine to be secured by a lock and chain on location.

The Computer Kinetics' Self Test feature is also incorporated into the game. This includes switch and lamp tests, RAM and ROM test, and a coin-mechanism test. Other features of the unit include a shock sensitive tilt mechanism designed to take any player abusing the game out of play, a modular service concept, a re-keyable vault door and an optional coin counter.

Export models which operate on various voltages and world coinages are also available. Multi-metered machines are available for export only.

Further information is available by writing to Computer Kinetics, 31129 Via Colinas, #701, Westlake Village, Calif. 91361.



DRAW 5: New from Computer Kinetics is this coin-operated tabletop electronic draw poker simulator with self-test.

Stern Unveil 'Meteor' Flip

CHICAGO, Ill. – Inc. has introduced solid state flipper, tures a Wow bon visual animation, me and a new audio syst

According to L president of sales for captures the awesom rifying power of hurtling toward Ear of the best graphics citing solid-state te on any pinball game

A third coin ch porated into Mete the new Susan B. A Also featured in t ROM capacity from

Other features of Wow bonus tied ment and specials: high-score-to-date last ball; a playfield makes the plastics artwork; a heavy d M-E-T-E-O-R drop held in memory a each player's next

When the coin game, all the lights tem activate for show. The audio into the unit featur up sound taken fro the new movie, M drop targets inco action.

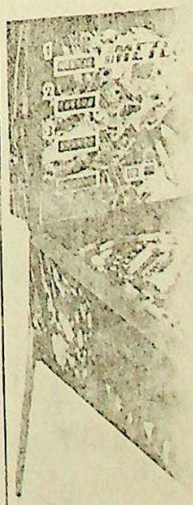
Other features front door clear bookkeeping fea value spinner scor increases and de target bank positi

The game is d *Meteor*, which Natalie Wood, K Landau, Brian K anella, Trevor Fonda.

The pingame by Robert McCa writer Isaac Asim to an artist-in-resi

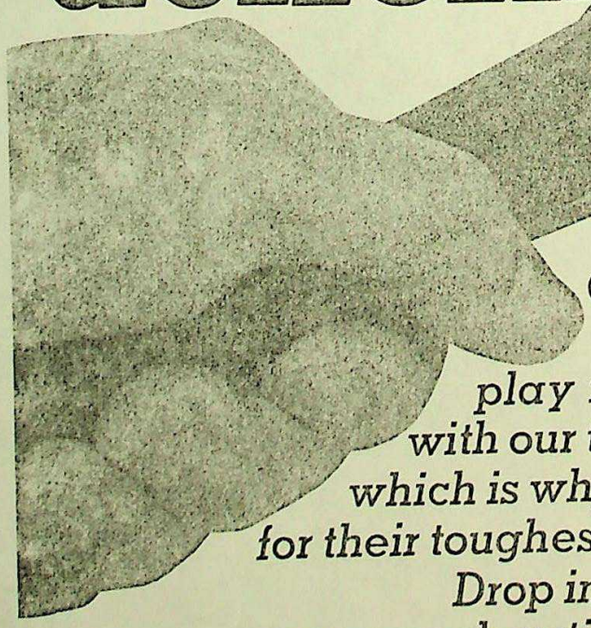
Stern, along national Pictures with TRG Comm major promotion the movie.

"The total pa station contests markets," Siegel national magazi ution of educatio libraries. In add variety of mov utor/operator tournaments, every game, an items such as be souvenir books.



STER

United invites you to see the worst pool players in Chicago in action.



Whatever else you may be up to at the AMOA Convention, don't miss our bar. You'll see how some guys play much rougher games than pool with our tables. But our tables can take it, which is why most operators prefer United for their toughest locations.

Drop in at Booth # 173-178. You'll see some rough action, but we guarantee your safety.

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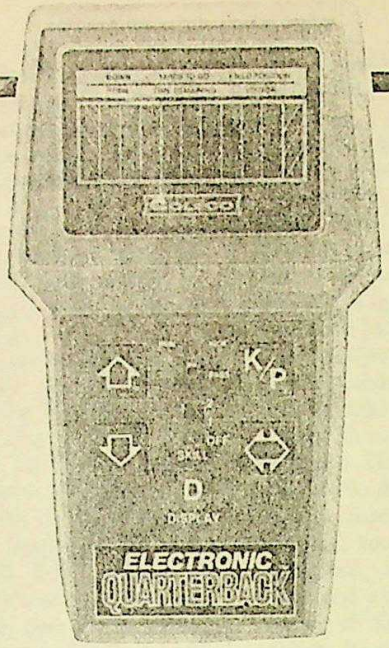
CONSUMER REPORTS
NOV. 1979



Electronic games

A couple of years ago, the craze in home entertainment was video games. That fad faded. Now toymakers are trying again. They have combined the electronic action of the video game with the portability of the pocket calculator. Result: the hand-held electronic game.

There are sports games played on miniature diamonds or gridirons, quizzes on math and spelling, games that require strategy and deduction, target games, and games that resist easy classification.

The games, which run on batteries, are for the most part plastic boxes slightly larger than pocket calculators. Some are expensive for toys: The 43 games we report on in the pages that follow cost from $9 to $55.

Since we couldn't fairly compare a baseball game with, say, a math quiz, we didn't rate the games against each other. We did end up with opinions, however, on how well each game did what it was supposed to do and whether the game was fun. Within their categories, the games are listed alphabetically.

Some of the games allow you to play against someone else. But most pit you against the permanent program in the game's brain, the tiny bit of silicon known as the one-chip microcomputer.

The complexity of the action, both visible and audible, varies widely. Sports and target games, for instance, are played on a field composed of an array of light-emitting diodes (LED's); the score is kept on a calculator-like display. You make your moves with buttons or switches.

Other games simply rely on a row of lights or a display of numbers and letters. That sort of game generally has a numbered or lettered keyboard for your input. Most of the games make appropriately electronic noises, which come from a tiny speaker inside the case. One game even talks.

All the games take ordinary batteries, usually 9-volt or AA sizes. We suggest you buy a few long-lived alkaline batteries along with a game, in anticipation that someone will play with it a lot. We measured battery drain and estimated the cost of replacement batteries for each game in typical use. In the following pages, "low energy cost" means 8 cents or less per hour; "medium energy cost," between 9 and 15 cents an hour; "high energy cost," more than 15 cents an hour.

With many of the games, you can avoid the expense of batteries entirely by using an a-c adapter. We've noted those that have a jack for such a device, which is available at extra cost. Games that use a 9-volt battery but have no jack will take a universal 9-volt adapter with snap connectors, such as the *Coleco 2098*, which costs about $6.

It's easy to leave a game on accidentally and run the batteries down—we did in our home-use tests. It's especially easy with games that lack a visible or audible signal to tell you when they're on. We've noted which games suffer that drawback. The *Texas Instruments* games are unique: They shut off if left idle.

Toys rarely have list prices. The prices given on these pages, therefore, are those our shoppers paid.

Warranties on toys are likely to be short, if they exist at all. But many stores will exchange defective games. And most manufacturers will—for a fee that works out to be about one-third to one-half the purchase price—replace or repair a game after the warranty runs out. Note that about 10 percent of the games we bought were defective or soon became so.

When the label gives a range of ages for which a game is suitable, we've included the range. But some of those label recommendations can't be taken seriously. Though most games give "adults" as the upper limit, some are so simple that they would quickly bore all but the youngest children.

A final caveat before you brave the toy-store crowds. Some toys labeled as electronic games are really the familiar battery-operated mechanical toys of holidays past, not sophisticated electronic games of the type reported on here. We recommend playing a game before you buy to be sure you're getting what you think you're getting.

Sports games

Computerized versions of baseball, basketball, and other popular sports compose the largest category of games we bought. Even without reading the instructions, a fan is likely to know most of the rules of these 15 games. The action of the sport is translated into an LED display that shows players and balls as moving blips. You can exert your skill to some degree by twiddling various controls to shoot a basket, say, or swing at a pitch. The display imitates the appropriate setting: a tiny gridiron, a miniature auto-racing track, or whatever.

All the games provide electronic sound effects. Sometimes the beeps and boops clue players to the action—one sound indicating a single, another a triple, for example. Or the effects may be purely atmospheric: the fanfare that follows a touchdown or the growl of a racer's engine as it revs through the "gears."

Some of the sports games claim to offer the "thrills and competition" of the real thing. They don't, of course. But many are fun in their own right. The best of the games give you enough control of the action to make speedy judgments in fast-changing and familiar situations.

Baseball

We played with five baseball games. Each display shows a small baseball diamond. All the games except the *Bandai* have a HIT button to press when the "ball," a moving light blip, sails over

home plate. The *Mattel* game, which allows control of running as well as of hitting, was the most complex and challenging, though the *Fonas Tri-1* also pleased baseball devotees on the staff.

Bandai Electronics Baseball 7931, $9. "Ages 6 and above." 1 game for 1 player. 1 skill level. Low energy cost. Uses 9-volt battery. No warranty.

Compared with the other baseball games, the *Bandai* is a bore. Its six display lights (labeled "single," "home run," "strike out," and so forth) blink on and off when you hold down a button. When you release the button, the light stops to tell you what has happened. Playing takes no skill at all. Score-keeping is mechanical, not electronic; scoring an entire game requires pencil and paper. The game also buzzes maddeningly and continuously as soon as it's switched on.

Entex Electronic Baseball 8001, $45. "Age 6 to adult." 2 games for 1 or 2 players. 1 skill level. Low energy cost. Uses 3 AA batteries. Has jack for a-c adapter. 3-month warranty.

The *Entex* can be played automatically or manually. In the automatic mode, you bat against the computer's pitches, which come over the plate periodically. In the manual mode another player, using the game's separate pitching control, can pitch you a curve, a slider, a fastball, a change-up, or a knuckleball. The computer does the fielding in both modes.

The display shows the count on the batter and the score in half-innings. Score sheets are provided to score games. Big, easy-to-see blips race around the field when there's a hit. A barrage of electronic sounds signals strikes, balls, outs, and various hits—but the instructions don't tell which sounds stand for what plays.

We found it far too easy to get hits, though that might add to the fun for children. Results also depend on chance rather than on the batter's timing. A game, true. But not much like baseball.

Fonas Tri-1 T600, $35. 3 games for 1 or 2 players. 1 skill level. Low energy cost. Uses 9-volt battery. 3-month warranty.

In this game, you are always at bat. Two persons can compete by taking turns. The computer sends blips to the batter's box when you press the PITCH key. A player can ignore pitches—which may be strikes or balls, fastballs or curves. Timing is important. Swinging early, for example, sends the ball to left field rather than to right or center.

Blips show a runner's progress around the bases. Tiny lights in the outfield indicate fouls, flies, groundouts, and every kind of base hit. The game allows for strategy, too: sacrifices, running on a groundout, and stealing bases. Double plays and extra innings are possible. A display at the top of the playing field records the statistics: inning, score, balls, strikes, and outs. Play is accompanied by electronic sounds reminiscent of a *Touch-Tone* phone. But you can follow the action without knowing what the noises mean, since the visual displays are easy to understand.

You can switch the *Tri-1* to a variant called Batting Champs, which lets you practice batting even in the middle of a game. Or you can play Star Chase, a sort of space-age game of tag. We much preferred the baseball, and we think other baseball fans would like it, too.

Mattel Electronics Baseball 2942, $27. "Ages 8 to 80." 1 game for 1 or 2 players. 2 skill levels. Low energy cost. Uses 9-volt battery. Has jack for a-c adapter. 3-month warranty.

In this game, too, your team is always up, and the computer always fields. A player presses the PITCH key and then decides whether to hit the ball. The pitch may be a curve, fastball, or change-up and may be ruled (by the computer) a strike or a ball. You can foul balls off by swinging too soon or too late.

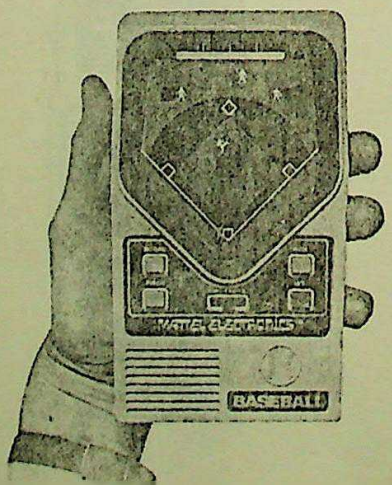
Bases light up when a runner lands on them, and the runner's progress is marked by lights between the bases. The game has a unique RUN key. Keep the RUN key depressed when there's a hit, and you might stretch a double into a triple or steal a base—or you might turn a clean single into a tag-out at second. The RUN key lends complexity and a dab of verisimilitude to the game, even at the simpler of its two skill levels.

A press of a button lights up an electronic scoreboard beside the field. It gives the same information a ball park's scoreboard does. A complete game, however, is five innings, not nine. The results of a hit are marked by sounds. Besides counting beeps to find out how many bases a fast runner might get on a hit, players must distinguish between "squeaks," "plops," "horns," "beeps," and "rising tones" to know what's going on. Some of us found the noises hard to follow, but others thought they made the game more challenging. All in all, the best of the baseball games.

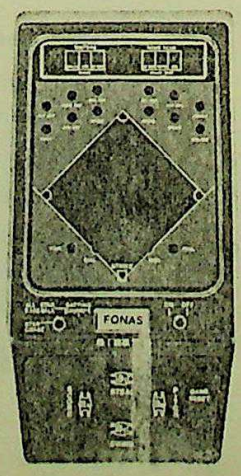
Tiger Computer Baseball 7480, $30. "Ages 10 to adult." 2 games for 1 or 2 players. 1 skill level. Medium energy cost. Uses 4 AA batteries. 3-month warranty.

In many ways, the *Tiger* is like the *Entex*. You bat against either the computer or a flesh-and-blood player who "pitches" to you from the field. The batter can wait out the pitch or swing at it. The pitcher can choose among fastballs, change-ups, and two kinds of curves. A scoreboard display shows the inning, runs scored, count on the batter, and so forth; lights show runners on base, though not their progress between bases. The game even allows such refinements as defensive positioning of players in the outfield, taking warm-up swings, and stepping out of the batter's box. For the record, the *Tiger* also plays "Take Me Out to the Ball Game" at the start and finish of a nine-inning game, and it provides a variety of sounds for each kind of play, though the instructions don't identify them.

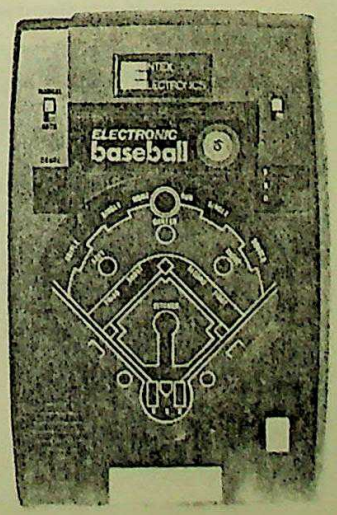
Mattel Baseball



Fonas Tri-1



Entex Electronic Baseball



The *Tiger* differed from the *Entex* in one important respect. We had a lot of trouble getting base hits—and none of CU's staff who tried *ever* managed to hit the game's fastball. That made the *Tiger* less fun than the *Mattel* or *Fonas*.

Football

Each of these games is played on a rectangular display that simulates a tiny football field in a tiny stadium, though for reasons of space only a nine-yard stretch of field is shown at a time. Score is kept automatically for a four-quarter game. And in each game, the player on the offense can move the ball to either side and down the field. The *Coleco* games outclass the *Mattel* because they allow you to pass the ball as well as run.

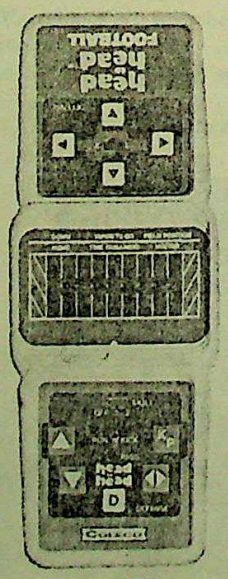
Coleco Head To Head Electronic Football 2140, $31. "Ages 8 to adult." 2 games for 1 or 2 players. 2 skill levels. Medium energy cost. Uses 9-volt battery. 3-month warranty.

Coleco Electronic Quarterback 2020, $30. "Ages 8 to adult." 1 game for 1 or 2 players. 2 skill levels. Low energy cost. Uses 9-volt battery. 3-month warranty.

Head to Head pits you against a computer defense or against another person who defends with the computer's help. You have running, passing, and kicking options, all governed by different rules. You can even change plays at the line of scrimmage, so the game is more complicated than most.

Buttons simultaneously control the progress of a runner (a bright, blinking blip) and of a pair of blockers (bright, unblinking blips) who protect him. On pass plays the quarterback enjoys similar protection. The defense (at least six dim blips) tries to stop the runner's progress, intercept passes, or latch onto fumbles.

Head to Head Electronic Football



When you play another person, who sits opposite you, the second player controls the motion of a backfield tackler.

Electronic Quarterback is essentially the same game without the option of human control of the defense.

In either game, a press of a button turns the whole field into a scoreboard, showing the down, yards to go, field position, and other information necessary to a quarterback. Electronic sound effects signify turnovers, field goals, and such.

We found the blips tough to see in a brightly lit room unless we looked directly down on the display. Still, we judged the games challenging at both skill levels. The two-person *Head to Head* model offers tackling and pass-interception control that *Electronic Quarterback* lacks, making *Head to Head* a more versatile game for only slightly more money.

Mattel Electronics Football 2024, $20. "Ages 8 to 80." 1 game for 1 or 2 players. 2 skill levels. Low energy cost. Uses 9-volt battery. Has jack for a-c adapter. 3-month warranty.

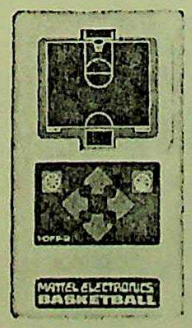
This game has buttons for moving a runner in three directions, a KICK button for punts or field goals (the computer decides which), and two keys to give automatic score, down, and yardage readouts. Instead of showing on the playing field, the score displays appear in small slots alongside the field.

Sound effects include referee whistles and a band that sounds "Charge." But the offense has only one man to run the ball, and there is no pass option, so the game lacks one of the most exciting possibilities real football has to offer. Clearly less enjoyable than the *Coleco* games.

Basketball

All these games are played on a half-court with one basket. Moving lights on the display indicate the offensive player's tries at getting a clear shot at the basket and the defensive team's attempts at blocking. Though we liked the *Mattel* basketball game more than the others, it still wasn't as much fun as the best of the baseball or football games.

Mattel Basketball



Bandai Electronics Basketball, $9. "Ages 6 and above." 1 game for 1 player. 1 skill level. Low energy cost. Uses 9-volt battery. No warranty.

Except for the presence of a half-court and new labels for the display lights ("jump shot," "free throw," "dunk," and so forth), this game is identical to the *Bandai* baseball game. Don't bother.

Coleco Head To Head Electronic Basketball 2150, $26. "Ages 8 to adult." 2 games for 1 or 2 players. 2 skill levels. Medium energy cost. Uses 9-volt battery. 3-month warranty.

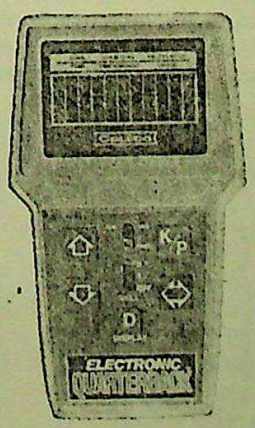
Like the *Head to Head* football game, this model permits playing against the computer or a live opponent. Either way, you're on the offense, using two PASS keys to move the "ball" blip around the game's half-court. Object: get a clear shot past an LED guard protecting the basket. When you compete with the computer, blips corresponding to a five-player defense move in random directions at random speed to block the shots. A live opponent can control the blocker by pressing buttons.

Elapsed time and scores are displayed electronically. We didn't find the abbreviated, multipurpose score display very helpful. Scoring baskets was quite a trick with this game because of the random actions of the defense. Too much is left to chance, we think, to make this game satisfying for very long.

Mattel Electronics Basketball 2437, $20. "Ages 8 to 80." 1 game for 1 or 2 players. 2 skill levels. Medium energy cost. Uses 9-volt battery. 3-month warranty.

In this game, you try to maneuver a single offensive player (bright blip) for an unblocked shot at the basket, while a five-player, computerized defense team (dim blips) moves randomly to block the way. Four buttons move the offensive

Electronic Quarterback



blip up, down, right, and left. Two SHOOT keys let you fire the ball toward the basket.

Depending on your play, you may score, lose the ball, recover a lost ball, and the like. There are no foul shots or penalties. Six different sounds signal that you've scored or that your shot has been blocked, among other things. The score display is somewhat cryptic.

Still, the keyboard is nicely designed, and the timing of the action is realistic enough for you to try several shots before turnover. If your play is speedy and you shoot when close to the basket, the game can be quite enjoyable.

Other sports

Mattel Electronics Auto Race 9879, $25. "Ages 8 to 80." 1 game for 1 player. 4 skill levels. Low energy cost. Uses 9-volt battery. 3-month warranty.

Tiger Raceway 7450, $30. 1 game for 1 player. 4 skill levels. Low energy cost. Uses 3 AA batteries. 3-month warranty.

Each of these games requires a player to maneuver a car (bright blip) through a pack of competing cars (dimmer blips) on a straight three-lane track. You try to cross the finish line four times (four "laps") in 99 seconds or less. A steering mechanism allows lane changing to avoid collisions, which spoil your time by bumping you back toward the starting line. Each model has a four-speed gear shift for changing speeds; faster speeds improve your time but make it tougher to avoid collisions. Both games display the elapsed time and make "varoom-varoom" noises.

The games differ slightly in the design of their lane-changing control. The *Tiger* has a tiny steering wheel about the size of a quarter (plus a counter to keep track of the number of collisions). The *Mattel* has a slightly concave thumb control that slides back and forth. Because the *Mattel* game provides faster action than the *Tiger*, we found it more of a challenge.

Mattel Electronics Soccer 1052, $27. "Ages 8 to 80." 1 game for 1 or 2 players. 2 skill levels. Low energy cost. Uses 9-volt battery. 3-month warranty.

Mattel's soccer game is virtually identical to its basketball game, though the playing-field display and goal are marked as befits soccer. Scoring goals here is much tougher than making baskets, however. The goalie is very fast and hard to fake out, but with practice you can score. Two soccer fans we turned loose on this game loved it.

Pulsonic Electronic Golf 72126, $25. "Ages 6 to adult." 1 game for 1 or 2 players. 1 skill level. Low energy cost. Uses 9-volt battery. No warranty.

The big display on this game simulates a fairway, a water hazard, a sand trap, two tees, and a putting green. Press a button that resembles a golf ball and lights blink on the course to show the path of the shot. The par changes nine times for a nine-hole "course." A small display notes par and keeps track of the score for each hole and for the game.

You can play with another person by passing the game back and forth. (The *Pulsonic* comes with a score sheet for two players.) Electronic noises accompany each stroke. But no skills are involved, since the computer decides every shot for you. Kids may enjoy the sound-and-light show, but we doubt that adults will.

Educational games

Of the eight educational games we looked at, five quiz a child on simple mathematics, two on spelling, and one on general information. Their teaching value depends on a couple of factors. One is design. The game has to be fun. A device that provides generous feedback, such as *Speak and Spell*, is more likely to hold a child's interest than one that occasionally winks a colored light. The attitude of parents and teachers toward these games is important, too. As with any other educational tool, a learning game can't be successful without encouragement and guidance from others.

Various staff members brought the games home for their children to play. The children ranged in age from 6 to 14. *Speak and Spell*, a toy that actually speaks, was far and away the most popular. (It's far and away the most expensive, too.) Children repeatedly wore out the batteries. There were fights over who would play with it next. The other spelling game, *Spelling B*, was also a hit.

The *Quiz Wiz* kept a family of three children, ages 9, 12, and 14, happy for several weeks. There are a variety of cassettes available for that game. We tried only one. After a while, the kids wanted to know if we could buy some others.

The mathematics games were less in demand. The simplest ones, lacking even a digital display, were the least popular.

All the games but the *Math Master* come with an inviting booklet that explains the game and gives variations for one or more players.

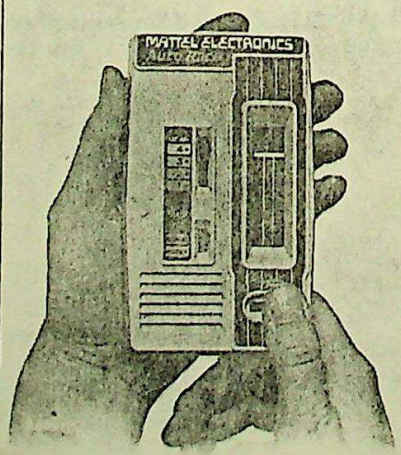
Mathematics

Coleco Lil Genius 2000, $10. "Ages 5 and up." 1 game for 1 player. Skill level depends on ability of user. Low energy cost. Lacks on/off indicator. Uses 9-volt battery. No warranty.

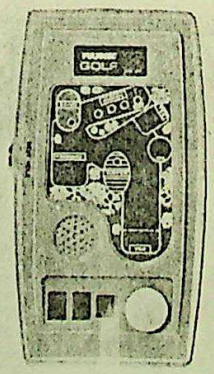
National Semiconductor Quiz Kid, $10. "Ages 5 and over." 1 game for 1 player. Skill level depends on ability of user. Lacks on/off indicator. Low energy cost. Uses 9-volt battery. Has jack for a-c adapter. 3-month warranty.

These two games are nothing more than answer-checkers. There is no digital display. Instead, *Lil Genius* has a freckled, bespectacled face and *Quiz Kid* has an

Mattel Auto Race



Pulsonic Electronic Golf



Quiz Kid

owl's face, each with one red and one green eye. When you punch in a problem and answer, the green eye flashes if you're right, or the red eye (and a buzzer on the *Lil Genius*) tells you you're wrong.

You can enter problems in addition, subtraction, multiplication, or division. With *Lil Genius*, you have to push three keys to find out if your answer is correct. Hit those keys in the wrong sequence, and the red light and buzzer go off. *Quiz Kid* needs only one key to get results. That game also allows slightly more sophisticated problems because it has a decimal key.

The major drawback to these games, we think, is that you can't look at a problem again to see what went wrong if the red light appears.

We think that most 5-year-olds, not to mention older children, would be happier creating their own games on a conventional $10 pocket calculator.

Epoch Math Master, $32. "Ages 5 and up." 3 games for 1 player. 2 skill levels. Low energy cost. Uses 2 AA batteries. 12-month warranty.

Math Master has a digital display, but its rather cut-and-dried approach to the subject of mathematics may not hold the interest of a child in the elementary grades. It offers problems at two levels of difficulty in addition, subtraction, multiplication, and division. Another option is problems presented in algebraic format, where you fill in a missing number on the left side of the equals sign. A third option is multiplication tables.

The game can be operated in two modes. If you choose the automatic mode, the *Master* gives you the right answer after you've given two wrong answers. In manual mode, you have to punch a key to get the answer.

The user chooses the type of problem and the mode. At the end of 10 problems, the display shows the number of problems presented, the number answered correctly on the first try, and the number answered correctly on the second (or further) try.

Texas Instruments Dataman, $22. "Ages 7 and up." 7 games for 1 player. Skill level depends on ability of user. Medium energy cost. Shuts off automatically if left unattended. Uses 9-volt battery. 12-month warranty.

Dataman presents its seven mathematical games in space-age splendor. You can create your own equations and answer them. *Dataman's* digital display gives you an "atomic light show" if your answer is right or E-E-E and an angry barrage of flashes if it's wrong. After two tries, the display gives the correct answer. When you've done 10 problems, *Dataman* tells you how many you answered correctly and presents another light show. The better the score, the longer the show.

The MEMORY BANK key allows one person to program and store problems for another person to answer. *Dataman* then gives the score and the time it took to complete the quiz. Turning the game off erases the memory.

Other keys provide multiplication tables and problems with missing factors. NUMBER GUESSER puts a mystery number (between 9 and 100) into *Dataman's* memory and gives clues to help figure out the number. When the player guesses the number, the display tells how many tries it took. Force Out and Wipe Out are games for two or more players; *Dataman* is passed around until someone is "out," rather like the schoolyard game of hot potato.

We think *Dataman* is the best of the mathematics games.

Texas Instruments Little Professor, $15. "Ages 5 and up." 1 game for 1 player. 4 skill levels. Low energy cost. Shuts off automatically if left unattended. Uses 9-volt battery. 12-month warranty.

Little Professor is similar to the *Math Master*. It has a digital display. You don't create your own equations on this one; it tests you in addition, subtraction, multiplication, and division.

You choose the level of difficulty and the type of arithmetic problem. You have three chances to answer each problem before the *Little Professor* gives you the answer. Each quiz consists of 10 problems. At the end of the set, the display flashes the number of problems you've answered correctly.

Spelling and facts

Coleco Quiz Wiz 2060, $25. "Ages 6 to adult." 1 game for 1 player. Skill level depends on ability of user. Tabletop model. Lacks on/off indicator. Low energy cost. Uses 9-volt battery. 3-month warranty.

This is a multiple-choice game. *Quiz Wiz* comes with a quiz booklet and an answer cartridge containing 1001 questions and answers on a variety of subjects. (Additional cartridges and quiz books cost about $7.)

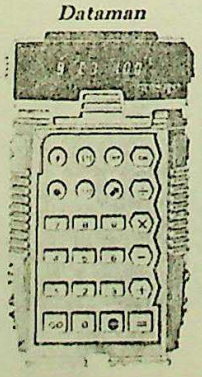
To play, you enter the number of any question and push answer key A, B, C, or D. If you're right, you get a beep and a green light. If you're wrong, a buzz sounds and a red light goes on. If you want to try again, you have to clear the machine and re-enter the question number and another answer. You have to clear the machine between each question, too. We found that annoying.

Questions on sports, movies, television, trivia, history, cartoons, words, and more have varying degrees of difficulty. A table of contents in the quiz book would have been helpful.

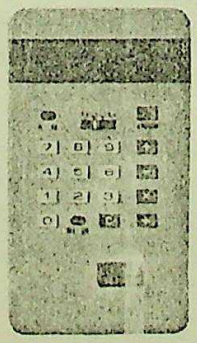
Texas Instruments Speak and Spell, $55. "Ages 7 and up." 5 games for 1 player. 4 skill levels. Medium energy cost. Shuts off automatically if left unattended. Uses 4 C batteries. 12-month warranty.

The most expensive of all the games we bought, *Speak and Spell* is unique in that it has a synthesized (though definitely human) voice. The voice is quite understandable. And it has quite a bit to say—a 236-word spelling vocabulary plus chit-chat in the basic unit. Additional vocabulary modules are available at extra cost. *Speak and Spell* has four levels of difficulty and five different games. In the

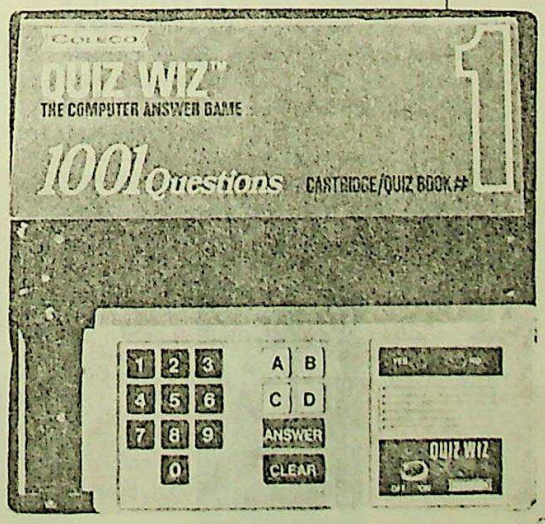
Dataman



Math Master



Quiz Wiz



basic game, the voice tells you to spell a word. As you spell it out on an alphabet keyboard, the voice repeats the letters pushed. After you press ENTER, the voice lavishes praise if you're right or says some variation of "try again" if you're wrong. At the end of each game, the display and voice tell you the score.

In another game, the display shows a word and the voice says, "Say it." Then the voice pronounces the word.

There are more special keys. MYSTERY WORD is like the paper-and-pencil game of hangman. The display shows dashes for the number of letters in the secret word. The player hits letter keys until he or she guesses the word. SECRET CODE codes and decodes words by alphabetic substitution. LETTER simply displays and pronounces randomly selected letters.

Texas Instruments Spelling B, $30. "Ages 6 and up." 5 games for 1 or 2 players. 3 skill levels. High energy cost. Shuts off automatically if left unattended. Uses 9-volt battery. 12-month warranty.

A picture book comes with this spelling game. When you push GO, a number appears on the display. You turn to that number in the booklet and spell out on the game's keyboard the name of the object pictured. A correct spelling puts RIGHT on the display. An incorrect spelling displays WRONG, and you get a second chance. If you're wrong again, the machine spells the word correctly and goes on to the next word. Each quiz of five words follows the pictures consecutively so you don't have to keep flipping pages in the book.

Spelling B has a 264-word vocabulary in three levels of difficulty.

Special keys include STARTS WITH (the user guesses the first letter of each word) and MISSING LETTER (dashes on the display indicate missing letters for the player to fill in). MYSTERY WORD is again a version of hangman. SCRAMBLE is for two players. One of them puts up to five words into the computer. The words reappear one at a time for the second player to unscramble.

Strategy games

Several electronic games are based on the old-fashioned pencil-and-paper games of mastermind or *Jotto,* where one player thinks of a multidigit number or a word, and the other player tries to guess it by using test numbers or words. After each try, you are told the number of correct digits or letters and the number of correct positions in the guess. In the electronic versions of the games, the computer thinks of the number or word, and one or two players do the guessing. The games all come with score pads to keep track of tries.

The children who played these games found the one game that uses words, *Scrabble Sensor,* more captivating than those that use numbers, perhaps because what's to be guessed is ordered rather than totally random.

With most of the games, if you give up trying to guess—too bad. Only the *Coleco Digits* and the *Invicta Master Mind* have a key that reveals the solution.

Another type of strategic skill is needed for the pair of blackjack games we looked at. Those games can be used to put your checkbook in order as well as to deal out the cards.

Coleco Digits 2050, $30. "Ages 8 to adult." 1 game for 1 player. 2 skill levels. High energy cost. Uses 9-volt battery. Has jack for a-c adapter. 3-month warranty.

Press CODE, and *Digit's* computer thinks up a four-digit number. If you choose skill-level one, the game uses only the digits 0 through 5. In skill-level two, all 10 digits are used.

For each guess, you press four numbers and TRY. The display tells you if any of the numbers are correct and whether they're in the right positions. Pressing GIVE UP unveils the mystery number. *Digits* doesn't keep track of how many attempts it takes to guess the number, but the score pad does. Best to play this one in the dark—the display is very hard to read in bright light.

Invicta Electronic Master Mind 5000, $20. "Ages 8 to adult." 1 game for 1 or 2 players. 3 skill levels. Low energy cost. Uses 2 AA batteries. Has jack for a-c adapter. No warranty.

The instructions (which require the use of a magnifying glass) say there are nine games. There's one. The level of difficulty depends on whether the secret number is three, four, or five digits. Another player can select the secret number, too. The display tells you how many numbers you've guessed correctly and how many are in the proper places. If you give up, FAIL gives the answer. And this game displays the number of tries it took to get the right answer.

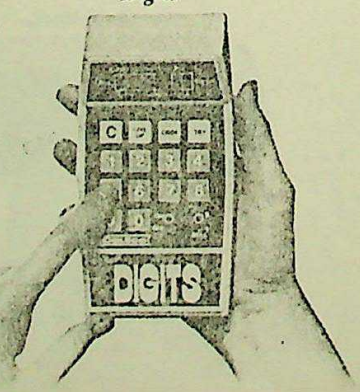
Milton Bradley Comp IV 4751, $23. "Ages 12 to adult." 1 game for 1 player. 3 skill levels. Tabletop model. Low energy cost. Uses 9-volt battery. 3-month warranty.

This game doesn't have a digital display. Instead, one column of lights tells you when you have the right numbers, and another when they're in the right places. The player can choose a mystery-number length of three to five digits. The R button tells the game to choose a mystery number, and E enters the guesses. *Comp IV* doesn't keep score. Flashing lights tell you when you've succeeded.

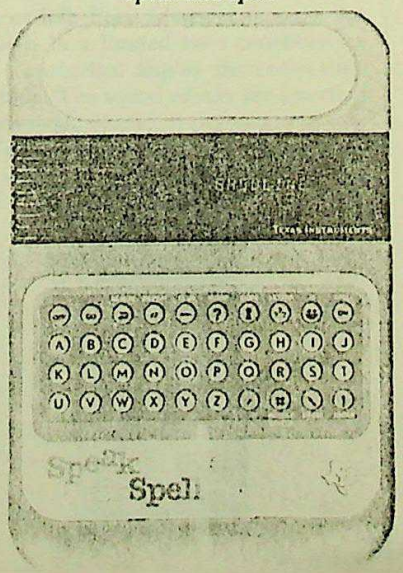
S&R Games Scrabble Sensor 47, $35. "Ages 7 to adult." 2 games for 1 or 2 players. 6 skill levels. Tabletop model. Low energy cost. Uses 9-volt battery. Has jack for a-c adapter. 3-month warranty.

Scrabble Sensor hides words instead of numbers. The alphabet part is on the key-

Digits



Speak and Spell



Electronic Master Mind

board, and the display is simply red lights that show the number of correct letters and positions in each guess. When one person plays, the game selects a four-letter word from its limited vocabulary of words dealing with outer space and rockets. When two people play, they enter secret words of up to seven letters for the other to decipher. *Scrabble Sensor* then becomes pretty much an electronic secretary to the proceedings of a *Jotto* match. The score sheets help in figuring out the words. We thought the game particularly entertaining for two players.

Tiger Think Tank 7440, $10. 1 game for 1 or 2 players. 1 skill level. Low energy cost. Uses 9-volt battery. Has jack for a-c adapter. Warranty covers parts for 12 months, labor for 3.

Players have to work harder at this game than they do with the others. *Think Tank* doesn't have a full keyboard, so if you want to enter the number 9, for example, you have to hit a key nine times. That's only part of the ritual. The R key sets the number. C lets you begin your guess. And NEXT lets you move along laboriously from digit to digit. CLUE makes the numbers disappear to reveal a code in the display that tells you if any of the numbers you've guessed are correct and if they're in the right place.

The display does keep track of the number of guesses, but the game's more work than it's worth.

Unisonic 21 Blackjack P1, $20. 2 games for 1 player. 1 skill level. High energy cost. Uses 3 AAA batteries. Has jack for a-c adapter. 3-month warranty.

Enterprex Blackjack BJ-21, $30. 2 games for 1 player. 1 skill level. Medium energy cost. Uses 3 AAA batteries. Has jack for a-c adapter. 3-month warranty for $3.

For those who want to hone their casino skills, these two pocket calculators double as blackjack dealers. Both choose cards from a 52-card deck in their memories, reshuffling after 38 cards are dealt. Their display shows digits for cards 2 to 9, A for an ace, and F for a face card. Both machines allow the standard blackjack ploys of splitting pairs, doubling, and insuring, and each scores the play by the book. Cumulative scores are shown at the press of a button.

To play, you enter a bet on the keyboard. After each deal, the *Enterprex* flashes the point total for dealer and player and shows the money you won or lost, which is helpful if you can't figure quickly in your head. It also lets you bet the same amount repeatedly without reentering the wager. The *Unisonic* doesn't have those niceties, but it lets you assign yourself an arbitrary beginning stake by entering some amount on the keyboard. Winnings and losses boost or reduce that stake. The *Unisonic* also lets the player "cut the cards" at each shuffle. Both machines came in a book-style case.

Target games

Bambino UFO Master Blaster ET201, $35. "Ages 5 to 80." 1 game for 1 person. 3 skill levels. Medium energy cost. Uses 4 AA batteries. Has jack for a-c adapter. 4-month warranty.

Mattel Electronics Space Alert 2448, $20. "Ages 8 to 80." 1 game for 1 person. 1 skill level. Low energy cost. Uses 9-volt battery. 3-month warranty.

These are similar target games that involve shooting "missiles" from one of three positions at the bottom of the screen. The goal is to hit "flying saucers" that appear at random from the top of the screen. The missiles can be controlled to some extent; if you get a hit, you score. If a saucer evades the missiles and hits the center of your base, the game ends. The higher on the screen a target is hit, the greater the score; a timer limits the game's length.

The well-designed *Bambino* has the most vivid action display we've seen short of video games. Its 70-odd fluorescent lights appear in the shapes of saucers, missiles, and explosion bursts. Its operating controls are also easier to use than those of the *Mattel* game.

Conic Destroyer 3101, $27. "Ages 7 and up." 1 game for 1 person. 1 skill level. Low energy cost. Uses 3 AA batteries. No warranty.

The *Destroyer* presents three ship channels on an illuminated screen. At the bottom of the screen, three red blips represent three ships in convoy; ahead of those is another blip representing a destroyer. The object of the game is to advance the convoy through the channels. Meanwhile, you must also protect the convoy from oncoming torpedoes, randomly fired, by interposing the destroyer between them. Buttons allow you to move the convoy forward and the destroyer right or left. Four advances through the channels in a limited time constitutes a win; a numerical display shows the time you took. The sound effects are assertive but musical.

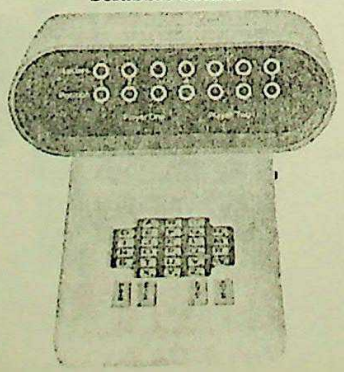
We found the *Destroyer's* push buttons sluggish in fast action. And the blips representing ships and torpedoes are identical, making them virtually indistinguishable when they're close together. Not as much fun as the *Bambino*.

Mattel Electronics Armor Battle 2938, $25. "Ages 8 to 80." 1 game for 1 player. 1 skill level. Low energy cost. Uses 9-volt battery. 3-month warranty.

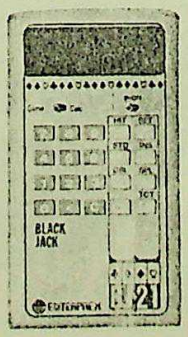
This game chooses random locations for the player and the target on a rectangular field divided by a grid into squares. Four buttons let you maneuver into position, one square at a time, to fire on the target. Meanwhile, you must also try to avoid invisible land mines.

Once you're in firing range, you have

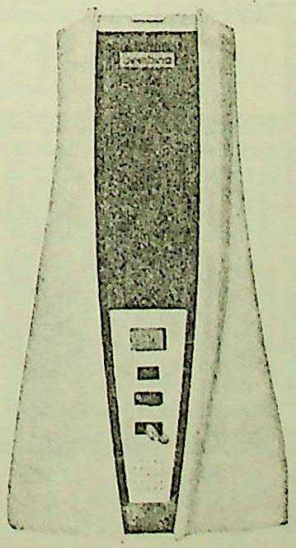
Scrabble Sensor



Enterprex Blackjack



UFO Master Blaster



three beeps before the target fires on you, so you must act fast. Striking a mine or being fired on by the target returns you to your starting position. An illuminated counter shows how many targets you've hit in the 99 seconds that is allowed for one round.

We found the explanation of how to fire a little vague, but we got the hang of it after a while. Sound effects include the tick of the timer, a siren that warns when you approach a mine, a short tune that indicates a target has been hit, another tune indicating time's up, and a warble that means you've been blown up.

Other games

Coleco Amaze-A-Tron 2010, $25. "Age 6 and up." 8 games for 1 to 2 players. 1 skill level. Tabletop model. Medium energy cost. Uses 9-volt battery. Has jack for a-c adapter. 3-month warranty.

We doubt many adults would find *Amaze-A-Tron* fascinating, but a number of 9- and 10-year-olds we tried it on judged it very enjoyable. *Amaze-A-Tron* presents a field of 25 numbers, arranged in a five-by-five square. You can select any of six two-player games as well as two forms of "solitaire."

All the games are based on a secret maze whose start and end are displayed digitally at the press of a button. You mark those points with two square plastic pieces, then try to decode the maze by moving plastic markers around the field. A correct move earns a little tune; a false move a harsh buzz. The intervals for each player's move are timed.

The mazes, of course, change with each game played. And some of the games are more challenging than others. We found the plastic playing pieces a bit awkward to use in two-player games, but that's only a minor drawback. When not in use, the pieces are housed in a recess on the underside of the set.

Coleco Zap 2030, $12. "Ages 5 and up." 1 game for 2 players. 1 skill level. Medium energy cost. Uses 9-volt battery. No warranty.

Zap is a sort of electronic Ping-Pong. Atop its oblong case is a serpentine course with a starting point at the center, a home base at each end, and two sets of numbered lights in between. A light zips back and forth on this path between players who must hit a button before the light reaches their base, or be "zapped."

The closer you let the light get to you, the faster it shoots back. Zap your opponent four more times than he or she zaps you, and you win. A fast-paced test of reaction time, *Zap* may eventually get boring. Still, one group of children kept returning to it between bouts with other toys.

Coleco Zodiac 2110, $41. "Ages 8 to adult." 3 games for 1 player. 1 skill level. Tabletop model. Low energy cost. Uses 2 9-volt batteries. Has jack for a-c adapter. 3-month warranty.

We wouldn't plan our lives around the information this game provides, but adults around CU's office found it quite entertaining. Children, generally, weren't enthralled.

Zodiac supplies three diversions. The first provides your basic horoscope. You find the code for your birthday in the accompanying booklet and punch that into the computer. Then you find and enter the proper time-zone number—a convenient but not very accurate description of your birthplace. Next, you put in the hour of your birth (if you don't know it, you can use midnight). With flashing lights and mysterious tones, *Zodiac* purportedly displays the position of the planets at the time of your birth. It then goes on to list personality characteristics by number. You look them up in the booklet.

Another mode is the daily preview. Want to know what November 29, 1984, holds in store? Ask *Zodiac*. You put in the date, the coded time zone, the time of day, and your birth-sign. The display responds with a number. Look it up and "see the future."

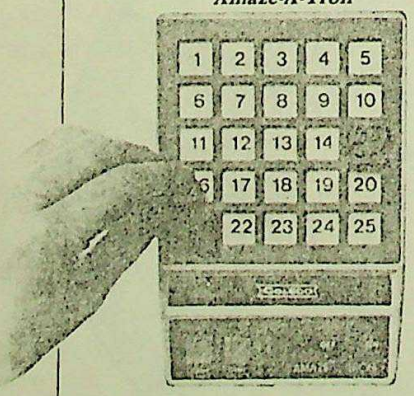
Advice is the third mode. The computer needs to know the date, place, birth sign, and the nature of the question (another code). The five display responses range from GO GO GO to NO GO.

If it weren't so tedious to look up all the codes, the game might be a good party pastime. But an astrologer we consulted said that *Zodiac*'s charts are sometimes inaccurate (due to lack of precision in birthplace) and do not even give the moon's position, which is important astrologically.

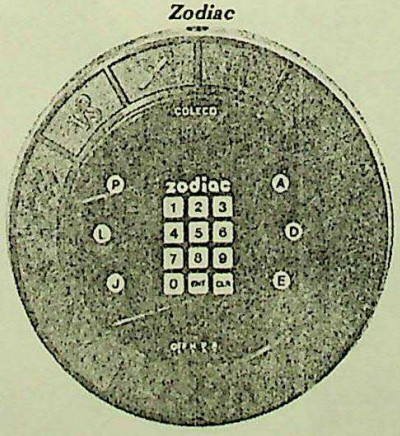
Ideal Maniac 3P1741, $45. "Ages 8 and up." 4 games for 1 to 4 players. 1 skill level. Tabletop model. Low energy cost. Uses 4 C batteries. 3-month warranty.

The heavily advertised *Maniac* is a square toy with a broad push-panel on each side and a small electronic display in the center. It poses four challenges, each of which is repeated three times in varying forms. The sequence or frequency of challenges cannot be changed. Challenge I is a musical-chair variation. In Challenge II, you count the notes in a short electronic tune. Challenge III's object is to match up a random pattern initially displayed with one of three subsequent ones. In Challenge IV, play-

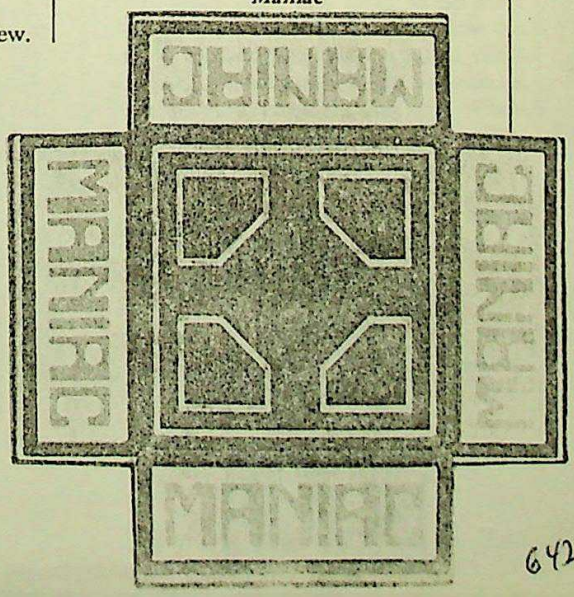
Amaze-A-Tron



Zodiac



Maniac



ers try to estimate the length of a tone played by *Maniac*.

The closer your response comes to meeting the challenge, the more points you score. You get two points if your timing is within one-quarter second or if your note-count is accurate. One point is your reward for responding within one-half second or one note. Outside those limits, you get zero. A win is 25 points. The game needs close attention, and background music or chatter is apt to prove annoying to players.

After each round, *Maniac* displays the cumulative score for each of four players—rather tedious if only one or two are playing. *Maniac* is also expensive, as these games go. Still, it's one of the few that entertained kids and adults equally.

Milton Bradley Simon 4850, $40. "Ages 8 and up." 3 games for 1 to 4 players. 4 skill levels. Tabletop model. Lacks on/off indicator. Low energy cost. Uses 1 9-volt and 2 D batteries. 3-month warranty.

Tiger Copy Cat 7520, $18. "Ages 5 through adult." 3 games for 1 to 4 players. 4 skill levels. Tabletop model. Lacks on/off indicator. Low energy cost. Uses 9-volt battery. 3-month warranty.

In the first game provided by both toys, a player matches a random sequence of musical notes by playing them on four broad push-panels of different colors. The game increases the number of notes in the sequence by one note each time until the player makes a mistake and gets a razzing. Four difficulty-levels extend the sequence from eight to 31 notes.

In a second game, you choose your own note sequence, adding a note and repeating the sequence over and over until a mistake is made. A third game, for two to four players, is essentially an elimination contest that parallels the first game. Children of several staffers loved the games—and so did several adults.

The *Copy Cat* seems ironically named; it's an almost direct knockoff of the popular, and considerably more expensive, *Simon*. There are some physical differences between the toys. *Simon* is about a foot in diameter and should be used on a tabletop. Its push-panels light up when pressed. *Copy Cat* is small enough to be hand-held, has small lights above its push-panels, and has sound effects rather less harmonious than *Simon's*. *Copy Cat's* price does make it seem attractive, but we think the contacts under its push-panels are not as safe from abuse as *Simon's*.

Parker Bros. Merlin 3200, $24. "Ages 7 and up." 6 games for 1 player. 1 skill level. Medium energy cost. Uses 6 AA batteries. Has jack for a-c adapter. 6-month warranty.

Merlin is shaped rather like a *Trimline* telephone. It has 11 numbered keys with a light in each and a speaker at one end. It plays six games: tic-tac-toe; Music Machine (you can teach it tunes of up to 48 notes); Echo (the player repeats a sequence of random notes); blackjack (but to 13, rather than 21); a pattern-logic game called Magic Square; and a variation of mastermind called Mindbender (the player must discover a mystery number of one to nine digits).

We found the blackjack game disappointing compared with the two others we tested. *Merlin* also proved easy to trap in tic-tac-toe. And the key numbers molded into the case are too small and uncontrasted to see easily. On the other hand, Mindbender proved about as challenging as the *Milton Bradley Comp IV*. And those of our testers with a musical bent—adults and kids—were delighted by the programmable music box of the Music Machine game.

On balance, we'd say all six games work well and are varied enough to hold a youngster's interest over the long term.

Tiger Rocket Pinball 7460, $30. "Ages 7 to adult." 1 game for 1 or 2 players. 7 skill levels. High energy cost. Uses 4 AA batteries. 3-month warranty.

Castle Kingpin 711, $20. "Ages 6 to adult." 1 game for 1 player. 1 skill level. Tabletop model. High energy cost. Uses 9-volt battery. 1-month warranty.

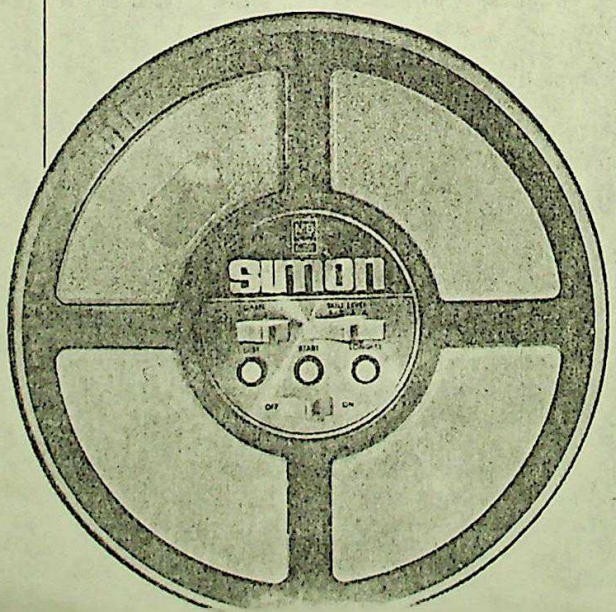
The common arcade game of pinball doesn't readily lend itself to electronic simulation. *Rocket Pinball*, however, makes a brave stab. Its ball is a red light that appears sequentially at various openings in the game board, sometimes unpredictably to simulate bounces off bumpers and flippers. The game keeps score for one or two players and works at increasing levels of difficulty. The levels can be chosen independently, so that an older child can be "handicapped" when playing against a younger one.

We found the game difficult to use in a brightly lit room and certainly not the equal of an arcade game. Still, it should provide some fun for young children (and it did, for the kids who tried it).

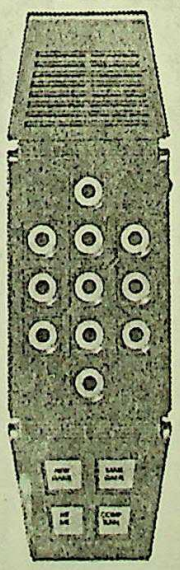
Though closer to its arcade counterpart, *Castle Kingpin*, we thought, pretty well fails as a pinball simulator. The *Kingpin* does have a real metal ball that rolls, a spring-driven launcher, and mechanical flippers. The trouble lies mainly in its electronic scorekeeper. Points are racked up as the ball rolls over flat numbers and stars, each worth various points. But the points don't add up; scores of 3 and 4 tend to be displayed as 34 rather than 7. It doesn't take much of that before the counter overflows and stops scoring—usually, in fact, before the game is over.

We have more reservations. The score, even when kept, has little to do with skill; points mount up no matter how the ball is flipped. And even a small child will soon realize that a single ball can be kept in play virtually forever: When both flippers are raised, the ball is effectively barred from the starting slot.

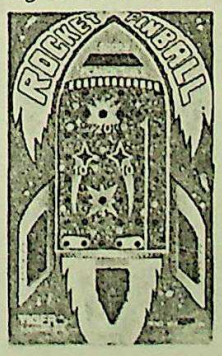
Simon



Merlin



Tiger Rocket Pinball



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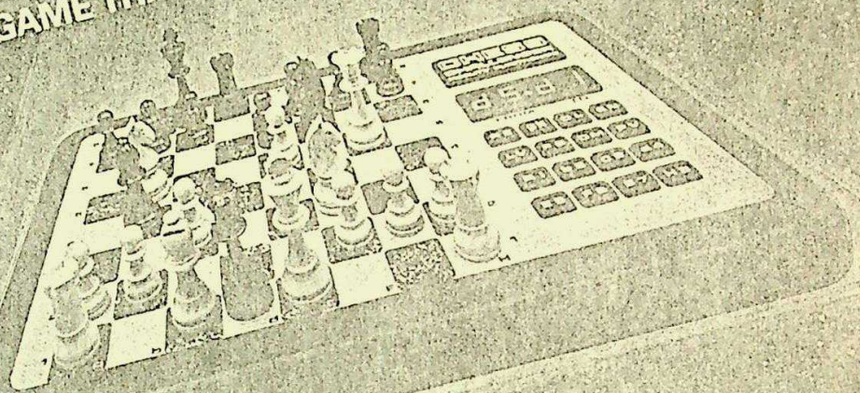

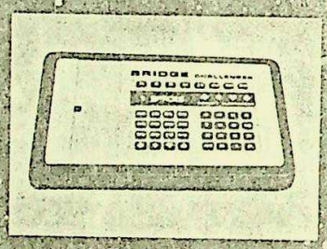

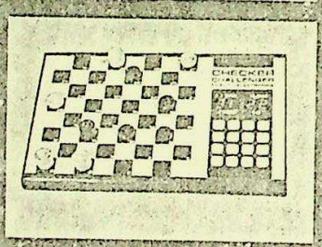

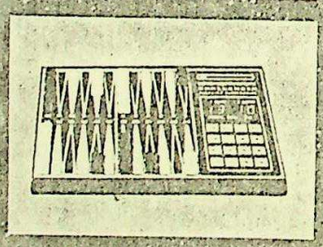

A perfect chess opponent, the Challenger® can play against you at infinite levels of skill, from beginner to expert. And . . . it speaks to you . . . calling out all moves, catching errors and announcing game progression. The Challenger® is also a superb teacher and it will even suggest your best move. Be warned, however, that the Challenger® has 1200 classic book opening moves and can analyze over three million board positions stored in its tiny computer brain. So, it can be very tough. It is so sophisticated, it is available in either English, Spanish, German or French language.

Other challenging computer games from Fidelity include . . . BRIDGE . . . CHECKERS . . . and BACKGAMMON. At fine stores everywhere.

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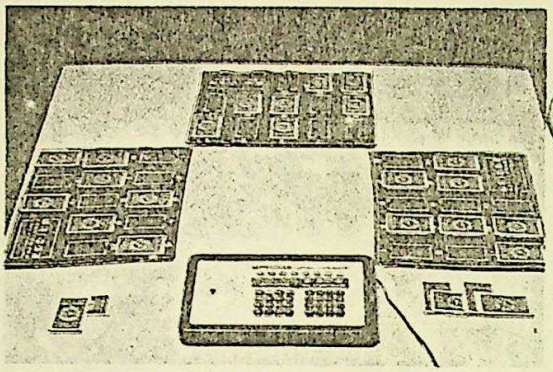
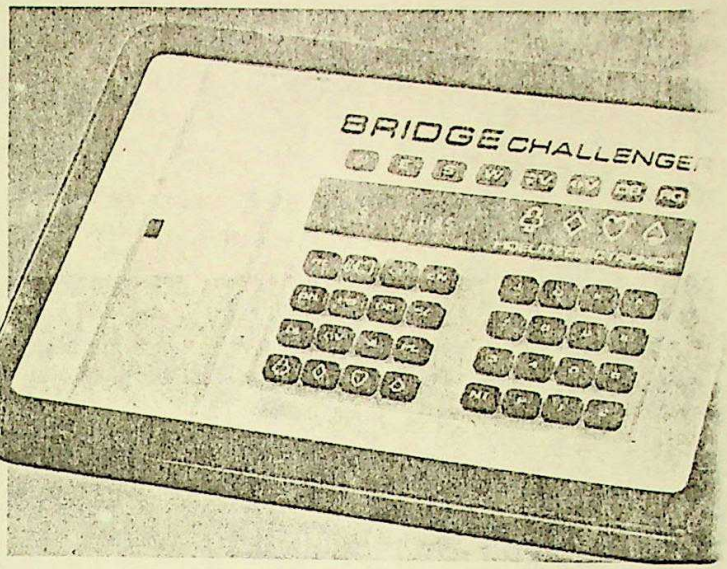
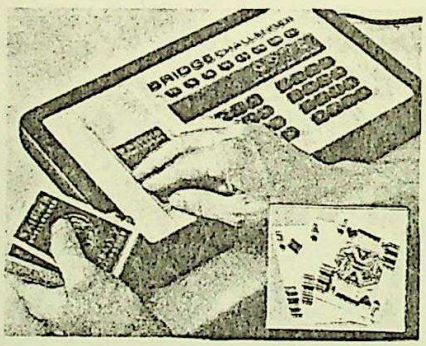
it lets this electronic marvel play bridge
as your partner, your opponents or both
. . . or you can watch how the game
"outsmarts" itself
in fully automatic play





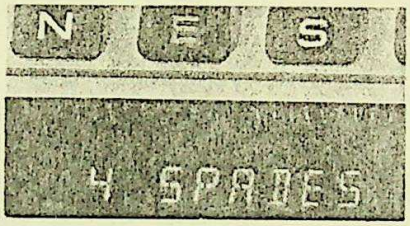
Need a fourth for bridge? Or a second, third and fourth? Or would you rather watch while four "others" play? Bridge Challenger® is always ready for a game, whether you're short a player or your bridge club is curious to see how a computer would have played their hands. Just tell the machine which positions to play (N, E, S, W), then deal out the custom cards as you normally would.



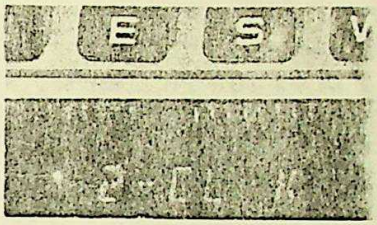
As each computerized player asks to see its hand, pass its cards—face down, one at a time—over the optical scanner and then place them in order on one of the three green felt playing fields provided.

In this manner, "everyone" sees only his own cards.

STAYMAN, GERBER AND BLACKWOOD PLUS SIX OTHERS



Bridge Challenger® automatically uses Stayman, Gerber and Blackwood. Assign each pair of partners one of the six additional conventions or variants that the machine knows: Preferred Minor, Strong Two Club and Weak One No-trump Openers, Jacoby Transfers, the Baron Convention and the possibility of specifying the strength of the 2NT reply following a suit opener. Follow your favorite conventions while entering your bids: the machine will automatically display its own bids on its turns, using the convention you selected for it. When bidding is completed, the screen displays the contract and play begins.



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Completing the contract does not have to end
You also have the option to replay the hand
designate any new combination of human ar
chine players for full duplicate play. And
wonder how the computer would have d
had bid "three no trump" instead of "two
just override the electronic player's bid and
tute your own.

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tom playing cards, carrying case, 9 volt ac
and 6-ft. cord for use with 110-v., 60-Hz. AC

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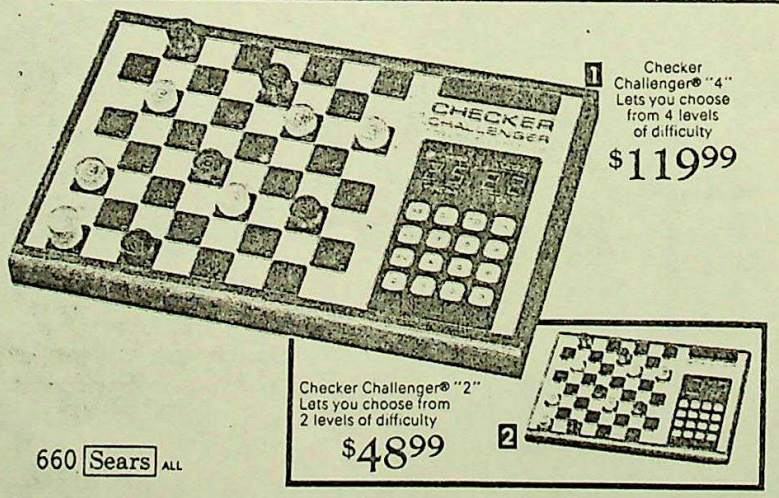

1 Checker Challenger® "4"
Lets you choose from 4 levels of difficulty
$119.99

Checker Challenger® "2"
Lets you choose from 2 levels of difficulty
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(1 and 2) Checker Challenger® Games

KEYBOARD, PLAYING BOARD: DuPont Mylar® polyester film-covered incorporates playing area, keyboard, ½-in. LED display. *Reset* key s game or cancels computer memory. *Enter* key enters your move into puter. *Clear* key clears unwanted move if Enter has not been presse recalls computers' last move. Press *To* key for moving a piece or to se special checker problems. *Level* key determines level of play. *Position V cation* key verifies position of each piece. The *"I lose"* signal lights w computer admits defeat. The *"I win"* signal lights when computer has w

PIECES: Stackable solid wood checker pieces, walnut or maple finish.

ELEC. INFO: 6-foot cord with switch. 120-volt, 60-Hertz AC. UL listed

(1) **Checker Challenger® "4"**. Four levels of difficulty. Problem n solves classic problems. Recall lets you compare computers' moves.

HOUSING: Solid walnut case measuring 12½x8x1⅛ inches high.

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3 C 2961—Shipping weight 3 pounds 3 ounces $119

(2) **Checker Challenger® "2"**. Two levels of difficulty.

HOUSING: Simulated wood-grained plastic housing. 12⅛x8x1 inch hi

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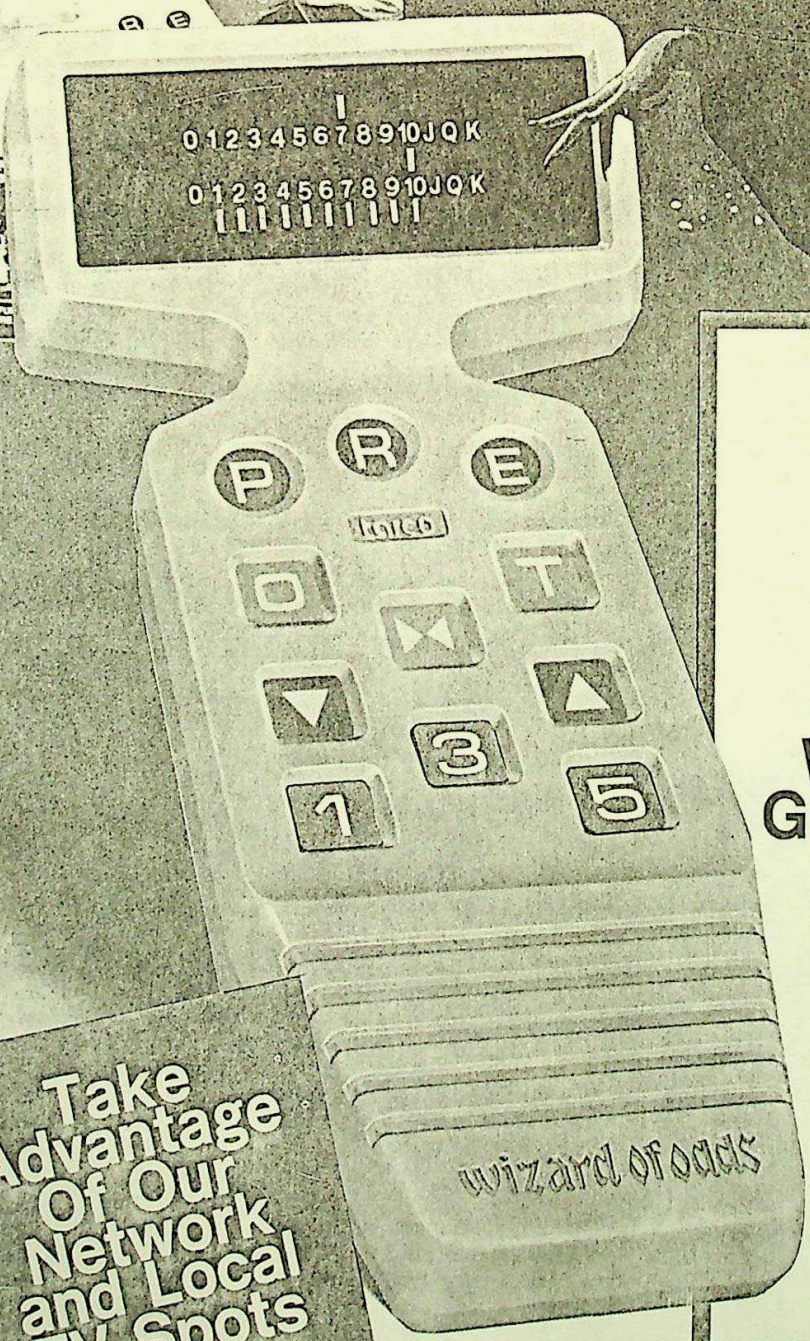

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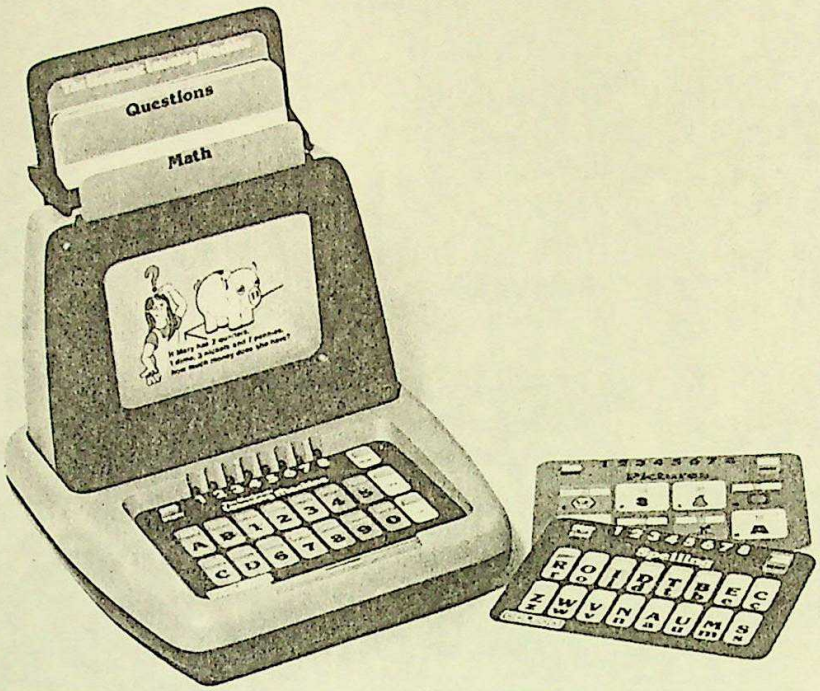

Electronic Learning Machine

HARTFORD, CONN. — Electronics are making the big news at Coleco. The new products are Electronic Learning Machine, Head-To-Head Electronic Soccer, Star Trek The Electronic Game, and Head-to-Head Electronic Baseball.

The Learning Machine takes more than 300 learning activities and makes them fun. It involves the child's sense of sight, sound, and touch. The machine comes with a starter pack including a cartridge and five learning programs.

With Electronic Soccer there's plenty of action on the field, whether you play offense or defense: against the computer, or an opponent.

There are two skill levels — semi-pro and pro.

The Star Trek Game pits the orbiting U.S.S. Enterprise vs. the V'ger in a two-player electronic space game.

By firing phasers at a desirable unclaimed world, each side attempts to neutralize it, and claim it for its own. The game also can be played by one person against the computer.

Electronic Baseball lets players manage opposing teams and the players have actual batting averages.

Throughout the game, LED lights show the ball coming down the pitch path and indicate the men on base while realistic electronic sounds accompany each action.

(Circle No. 685 on Reader Inquiry Card)

Licensed characters boost Carlin's lines

NEW YORK — Chairs, bop bags, and snow toys are generating the excitement at Carlin Playthings.

The TV Chair line has added such properties as The Amazing Spider-Man, The Incredible Hulk, Mighty Mouse, Mr. Spock, Twiki, and Raggedy Ann and Andy.

There are 10 new bop bags, each featuring a popular licensed character. Some of them are Spider-Man, Hulk, Buck Rogers, Bugs Bunny, and Mighty Mouse.

Snow Toys feature Spider-Man and Hulk and are molded in bright yellow, with the characters laminated in full color.

The Snow Toys include Sno-Disc, Sno-Sleds, Sno-Shovel, Sno-Mold, Sno-Shoes, and Slic-Sleds.

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Rock-A-Bye-Bear plays maternal soun

Rock-A-Bye-Bear

FORT LAUDERDALE — A t bear that emits a restful sound into being after a doctor disco that crying newborns could be l to sleep by the same sounds the heard before birth.

Dr. William C. Eller pla mini-microphone in the uterus expectant mother and recorde pulsebeat and other sounds u babies hear.

The sounds were recorde Rock-A-Bye-Baby reproduce sound electronically, using computer techniques.

The Rock-A-Bye-Bear itse soft toy made of plush, with lock eyes and nose, and an knob.

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Galoob rings in ye

SAN FRANCISCO — Ho Pinball is one of the new entri Lewis Galoob and it featu noise, lights, action, and pla real game.

The deluxe miniature pinba also has automatic scoring an ting.

Instant Replay is a ne tromechanical game featu stant visual photographs play.

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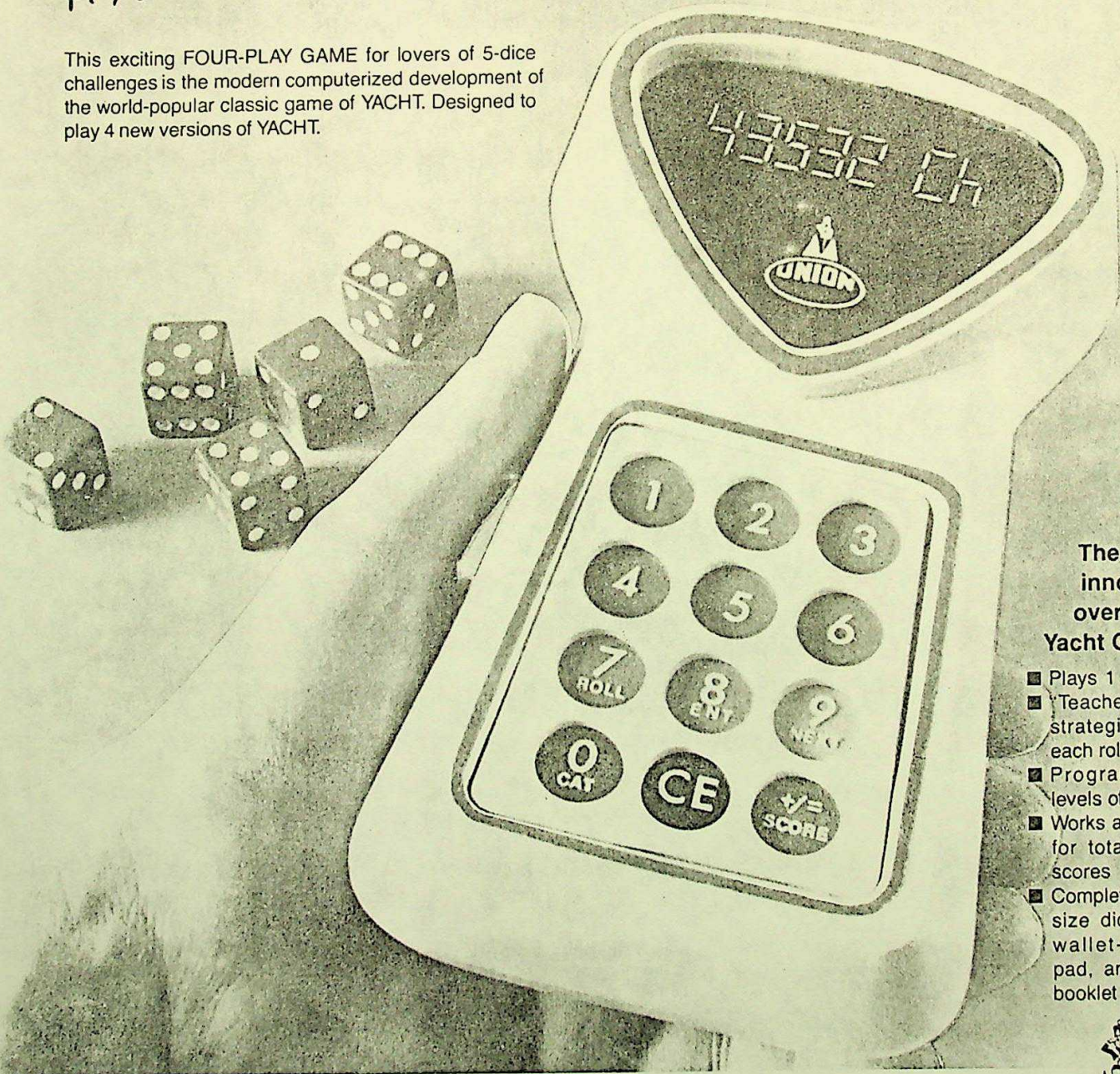
NEW-at MINER

ELECTRONIC YACHT FOUR

PLAYTHINGS, FEB. 1980
P. 70

This exciting FOUR-PLAY GAME for lovers of 5-dice challenges is the modern computerized development of the world-popular classic game of YACHT. Designed to play 4 new versions of YACHT.



The electron innovation fr over 20 millio Yacht Game fan

- Plays 1 to 4 perso
- "Teaches" the ma strategic moves f each roll of the dic
- Programmed for levels of skill
- Works as a calcula for totaling playe scores
- Complete with 5 s size dice, dice c wallet-style sco pad, and instruc booklet

Phone, wire, or write for full details on YACHT FOUR, and for the complete 1980 Catalog of MINER toys and games.

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PLAYTHINGS FEB 1980
P. 116

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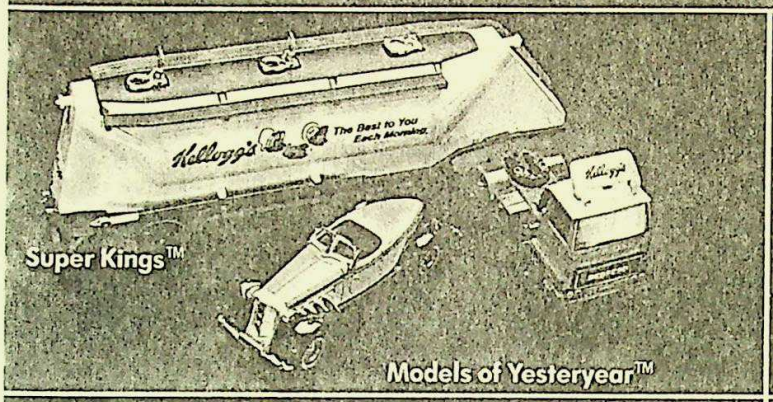
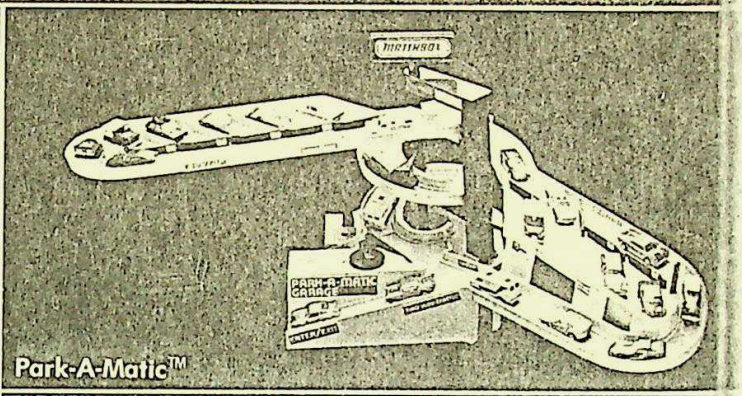


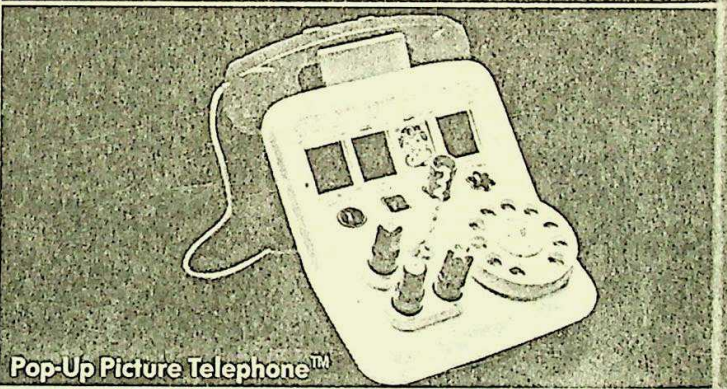
Super Kings™

Models of Yesteryear™

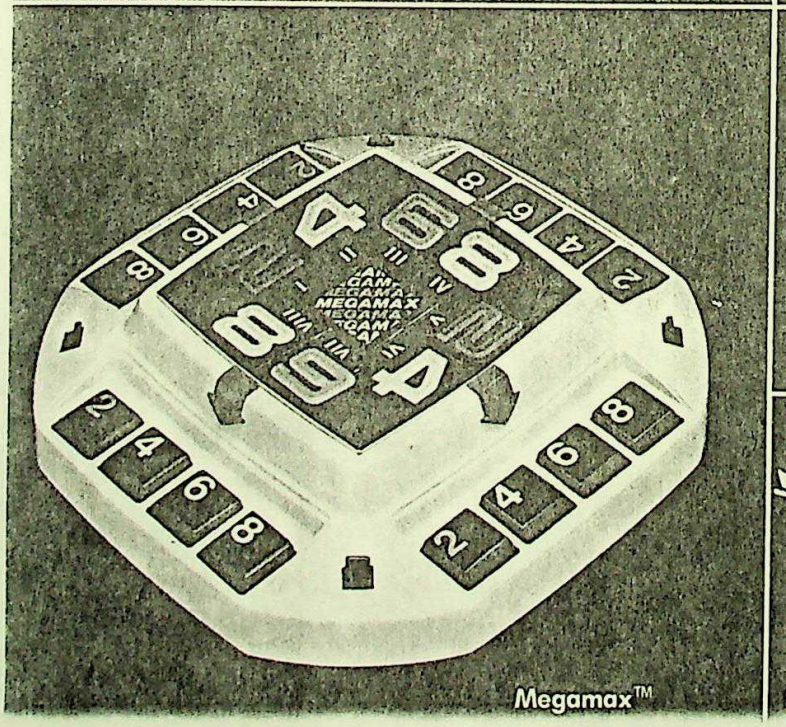


Park-A-Matic™

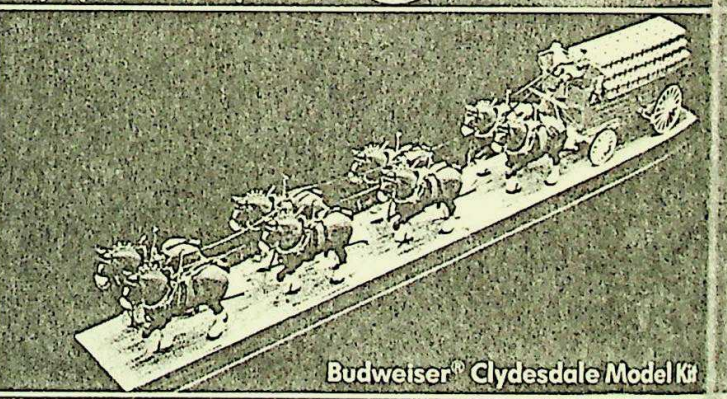
Press-A-Print™



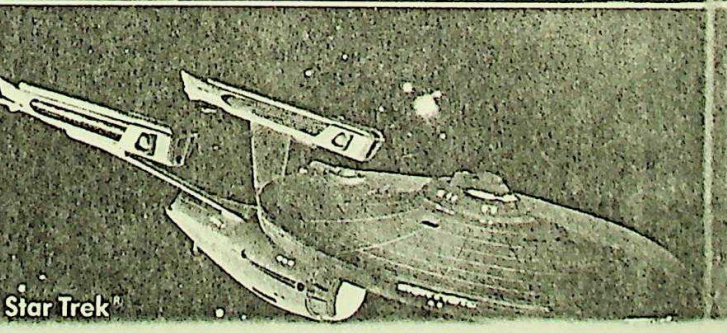
Pop-Up Picture Telephone™



Megamax™



Budweiser® Clydesdale Model Kit



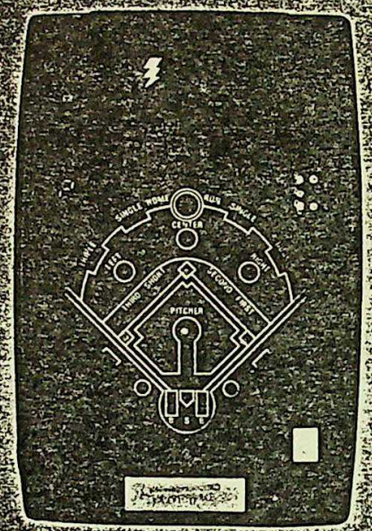
Star Trek®

P.182 PLAYTHINGS FEB. 1980

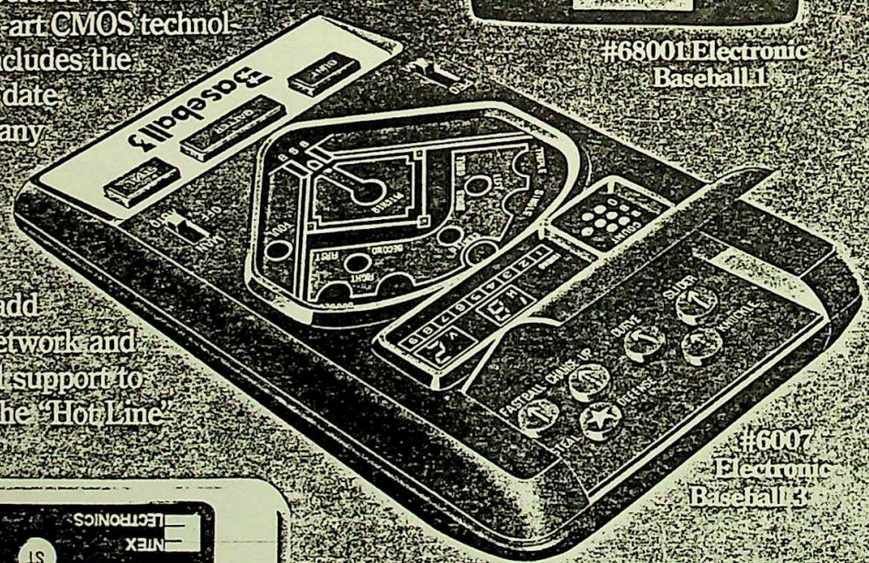
P.183

ELECTRONIC GAMES

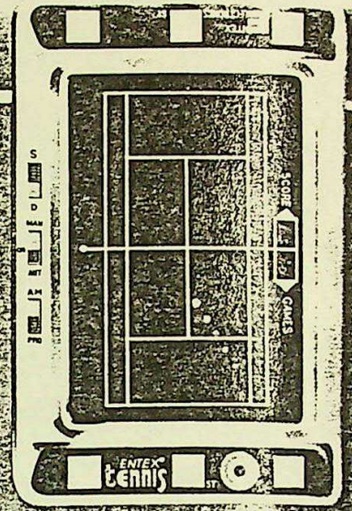
This powerful new line-up of electronic games from Entex is going to take the industry by storm.
Every game is loaded with all the rock 'em, sock 'em color, excitement and full-field action of the real thing, including dramatic sound effects and brilliant LED readout displays.
We've got games of every major sport, games of chance, arcade games, musical games, and more. Each incorporates the latest state-of-the-art CMOS technology. And includes the most up-to-date features of any in the industry.
And remember, Entex will add plenty of network and spot T.V. ad support to make this the "Hot Line" for 1980.



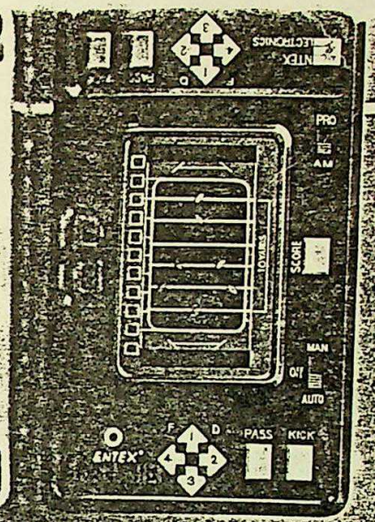
#68001 Electronic Baseball 1



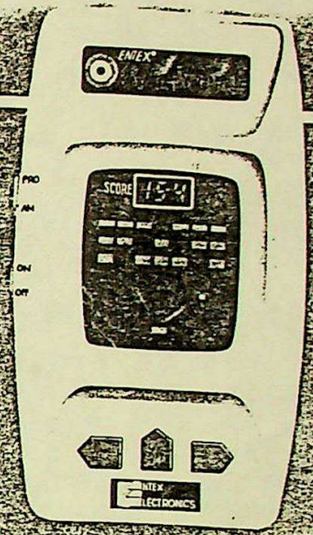
#6007 Electronic Basefall 3



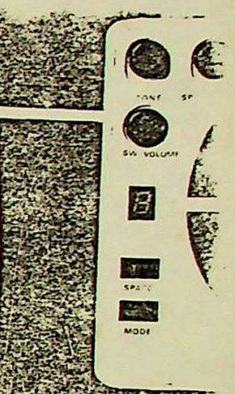
#6013 Electronic Tennis



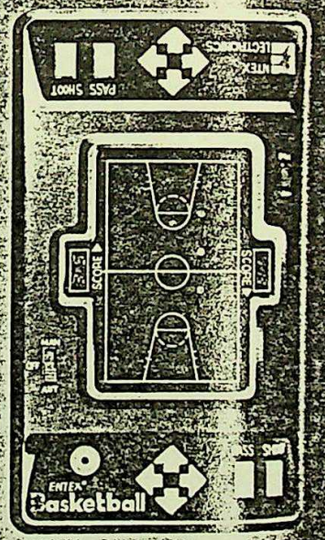
#6018 Electronic Football 3



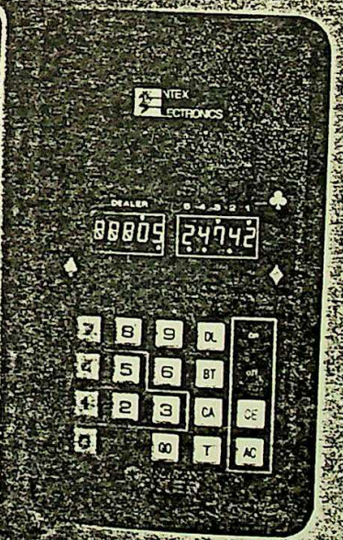
#6015 Electronic Blast Ff



#6014 Ele Mirach M

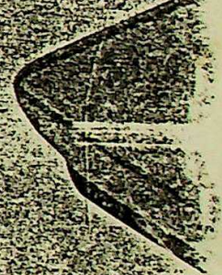


#6010 Electronic Basketball

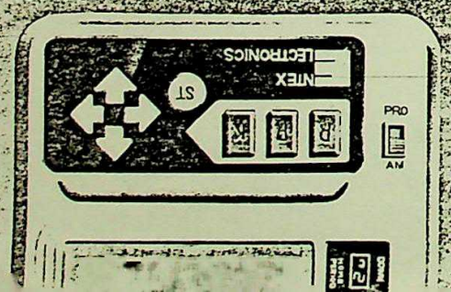


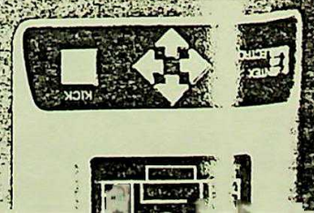
#6005 Electronic Poker

#6011 Electronic Raise the Devil Pinball

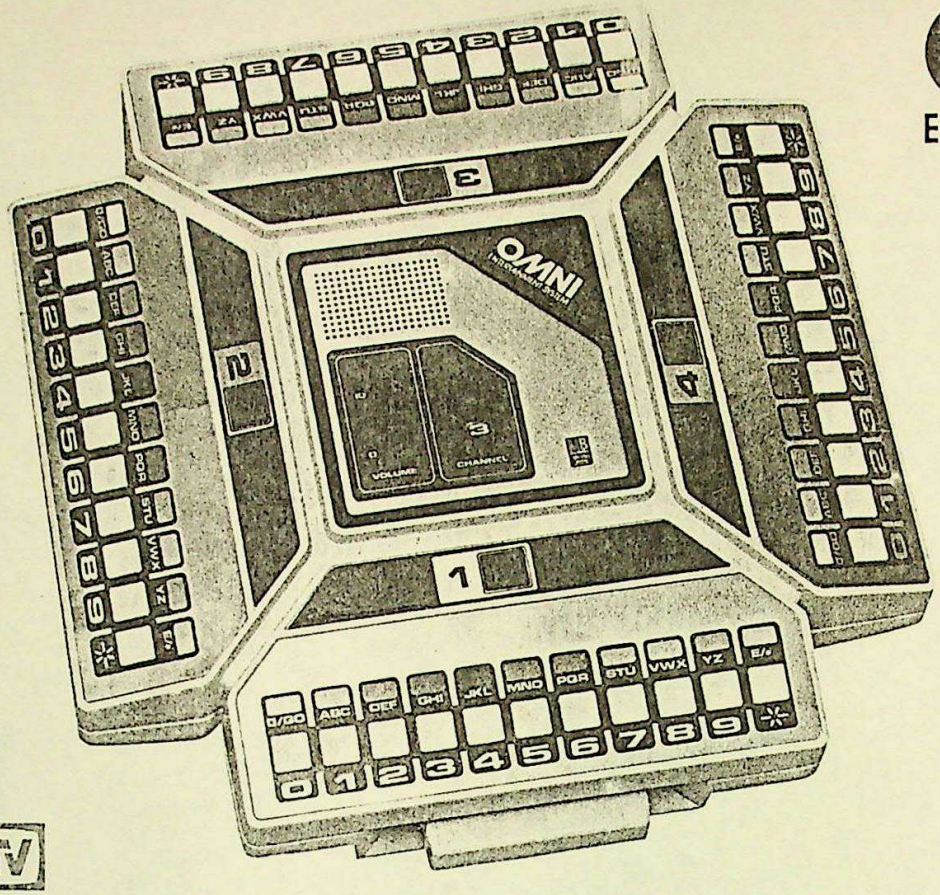


"MAC" MIN A host of sop for ka





OMNI™ ENTERTAINMENT SYSTEM



MB ELECTRONICS
MILTON BRADLEY®

TV

OMNI™ ENTERTAINMENT SYSTEM

Ages: 8-Adult **1-4 Players**

Put yourself in the contestant's seat as electronic Omni hosts game shows, contests, sports quizzes and party games. Controlled by special tape cartridges, Omni actually asks players to answer trivia questions, name tunes and spell words. Answers are entered on a keyboard, while Omni announces winners and solutions and flashes the score on a digital display panel. Omni comes with a full-length tape cartridge sampling the challenging selection of game and quiz topics available separately. Just pop in a different cartridge for a new game. You can even listen to your regular 8-track tapes on the Omni system. Omni plugs right into any AC electrical outlet, no batteries required.
No. 4067

OMNI™ CARTRIDGES

Enjoy hours and hours of question and answer fun with quiz or game topics of your choice! Each programmed, full-length Omni cartridge pops right into the Omni entertainment console. Omni knows all the answers, do you?

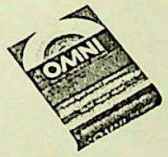
Jeopardy
How could you bet on it?
No. 4068

Password Plus
Have a clue?
No. 4069

Music, Music, Music
Mystery melodies.
No. 4070

Words, Words, Words
Spell that, please!
No. 4071

Just For the Fun of it!
Party games.
No. 4072



Quick Quiz
No brooding here!
No. 4073

Sesame Street Quiz
Fun for little folks
No. 4074

TV Trivia
Stay tuned for Vincent Price!
No. 4075

Movie Trivia
"Screentest" with Vincent Price.
No. 4076

Football Quiz
Score or fumble?
No. 4077

Baseball Quiz
How's your batting average?
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Sports Trivia
Fun with Pat Summerall
No. 4079

PLAYTHINGS, FEB. 1980
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PLAYTHINGS, FEB., 1980

P. 226

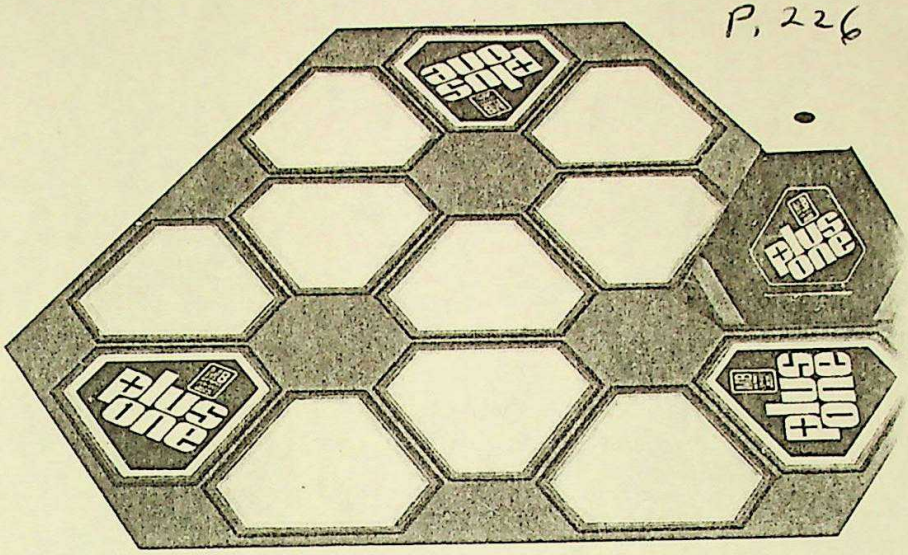
plus one™

Ages: 7-Adult **1 or more Players**

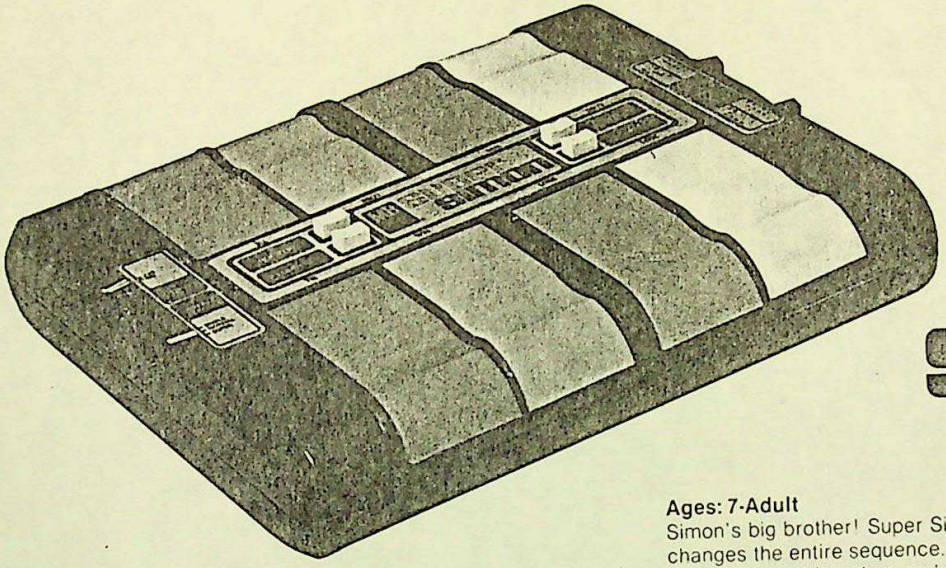
Computerized Plus One never forgets! Flip him back and forth, building and retracing a path that grows more complex with each turn. Make a wrong move and Plus One informs you with a "razz" that you're OUT!

No. 4044

TV



MB ELECTRONICS MILTON BRADLEY®



super simon

Ages: 7-Adult **1 or more Pla**

Simon's big brother! Super Simon doesn't just add a color each tur changes the entire sequence. Try to follow Super Simon at the same he spews out his colors and sounds. Or even let him pick the play wants to repeat a sequence!

No. 4050

pocket simon

Ages: 7-Adult **1 or more P**

Miniature version of the runaway best seller. Plays just like Simon plete with colors, sounds and the famous "razz." Tote and play Simon at the beach, on the bus, anywhere, anytime!

No. 4046

PIA-THINGS 3/80

IN LAK IS PL TO

This year we've g
great new games—
are sti

MR. POP!
The beginner's Perfection in which children race the clock to match the face of Mr. Pop.

LAKESIDE'S LE BOOM
The electronic game that will blow your mind!

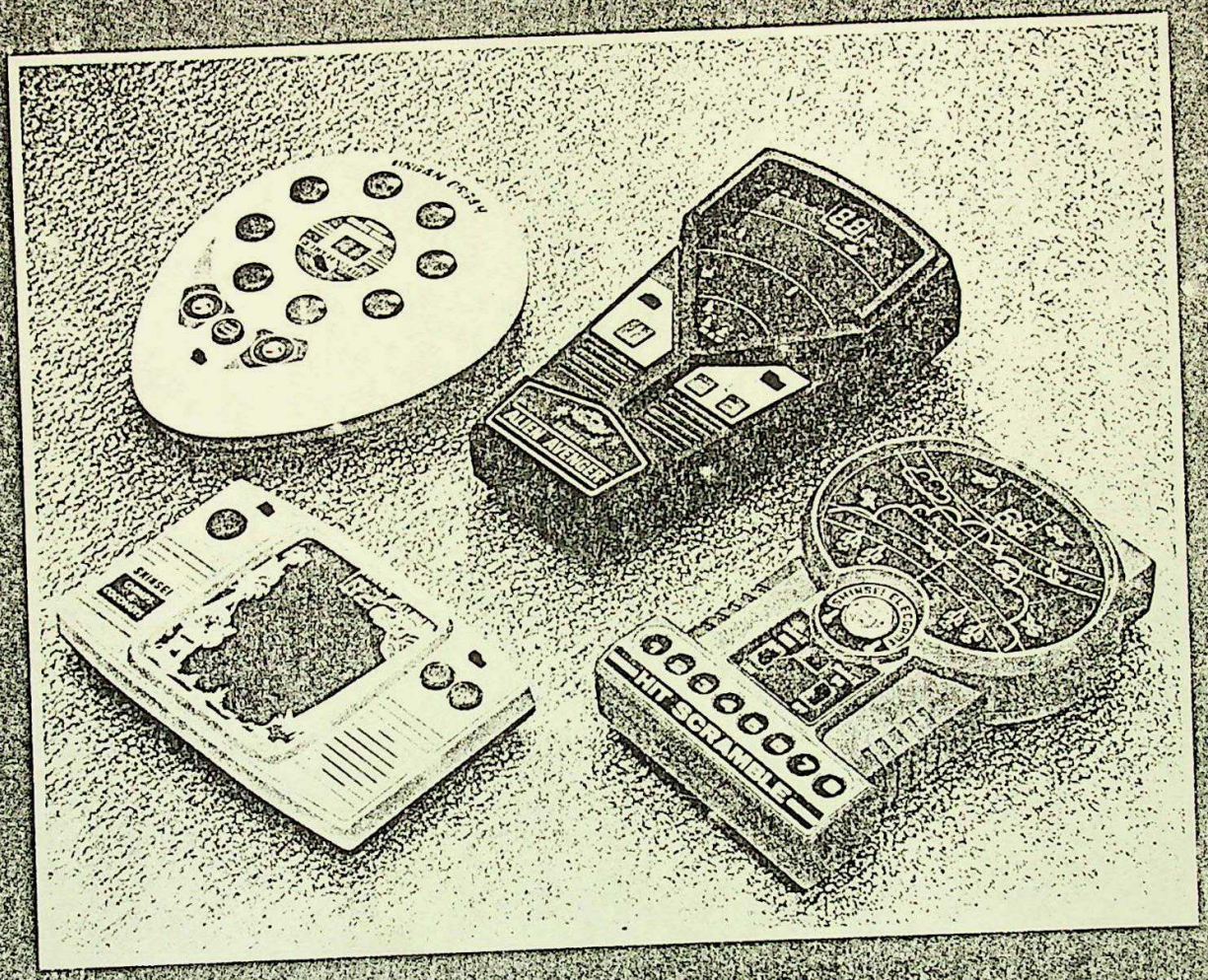
ZANY ZAPPERS
The electronic flashing glasses that are the zaniest new novelty item in years.

Lakeside®

16

PLAYTHING 4/80

SHINSEI



The expertise and quality that you are use to in our Radio Control, can now be found in our Electronic Games.

General Electric has selected only our electronic games for participation in their battery recharger promotion.

P 8

Shinsei Corporation
[illegible] 166th St., Carritos, Calif. 90701

Varied marketing strategies key growth of

ELECTRONICS

Game manufacturers turn to TV, print promotion as category is deluged with product

By Mark Sullivan

It started with a beep, shipping $21 million worth of merchandise in 1977. The usually staid toy industry began to take notice of this electronic upstart easing its way into the toy department. In 1978 toy people had no choice but to notice. Electronics accounted for $112 million in manufacturer shipments, an increase of more than 500 percent. The electronics explosion had hit the toy department.

If 1978 was the explosion, then 1979 represented the proliferation. Electronics shipped $375 million worth of goods at the manufacturer level and sold 38 million units at the retail level, ringing cash registers to the tune of $782 million.

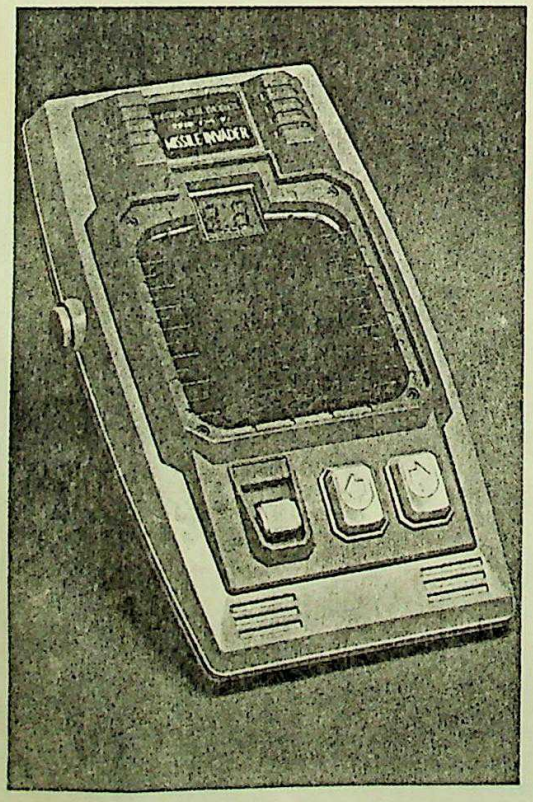
The beep that started it all had become a roar.

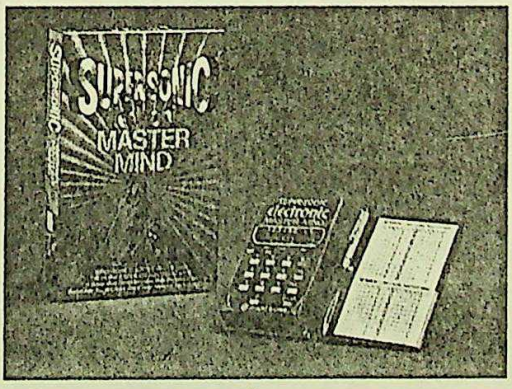
And in 1980, electronics shows no sign of letting up. Manufacturers have unveiled a dazzling array of new products: football games with half-time shows and victory songs, games that tell you when you're right and when you're wrong, even games that tell you to hurry up when you take too long between moves.

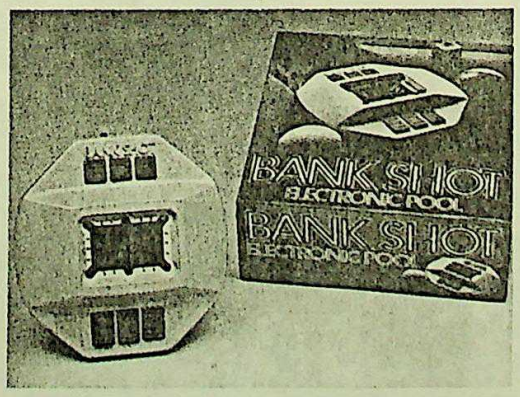
Out of an estimated 400 electronic items displayed at Toy Fair, nearly 300 were electronic games. Manufacturers who had previously never integrated a circuit were showing complete lines of electronic items. And buyers who thought 1979's explosion had made them veterans of the electronics war learned that it would not be easy to shop for electronics this year.

With the tremendous explosion of electronics has come the fallout as people at all levels of the industry try and get a handle (or at least a toehold) on the market.

One of the most significant developments to come out of the fallout is the increased emphasis on the marketing of electronic games. "Marketing is now as important as production," says George Ditomassi,







Far left, Bandai's Missile Invader is available in regular and "super" versions. Top right is Invicta's Supersonic Electronic Mastermind. The marketing of this game is aided by stellar packaging. Below right is Parker Brothers' Bank Shot electronic pool game.

Varied marketing strategies key growth of

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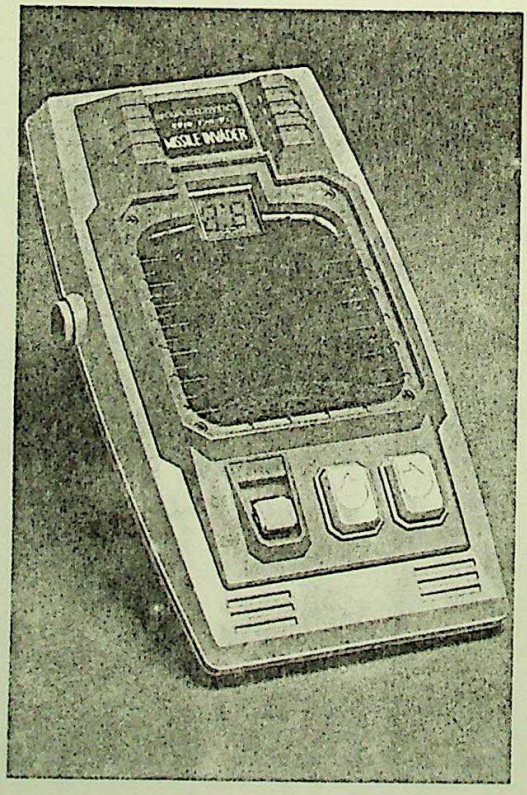

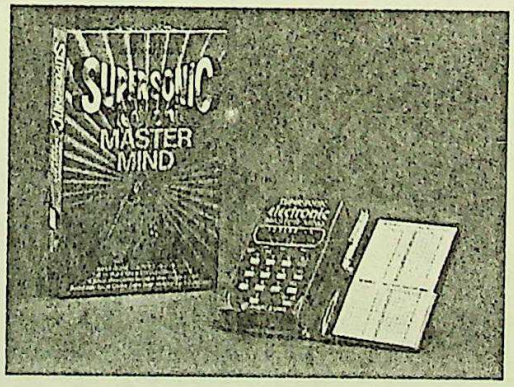

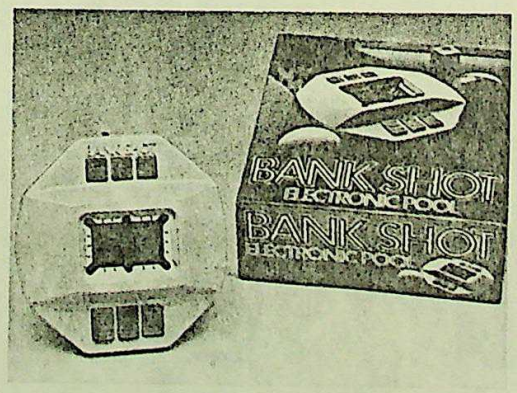

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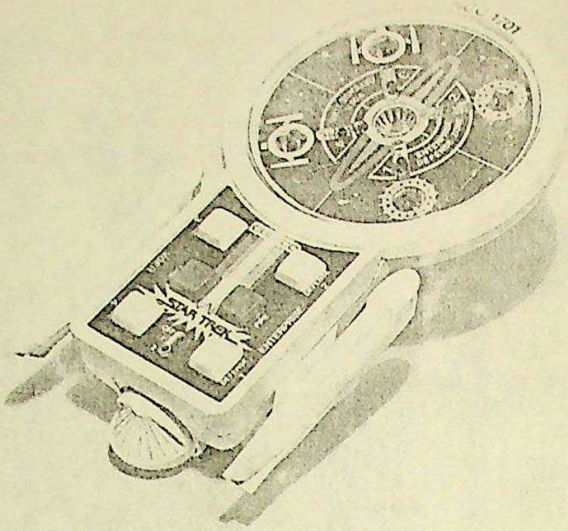
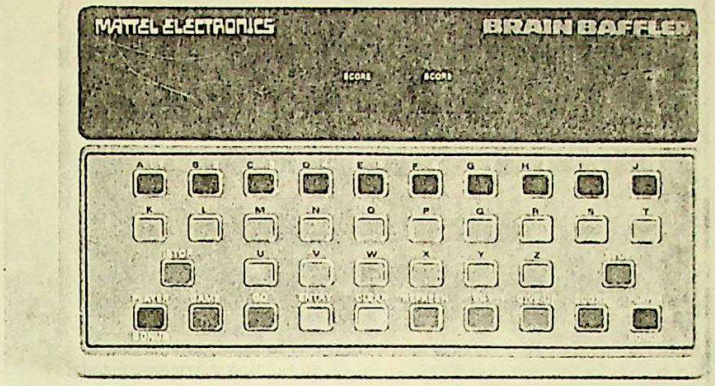
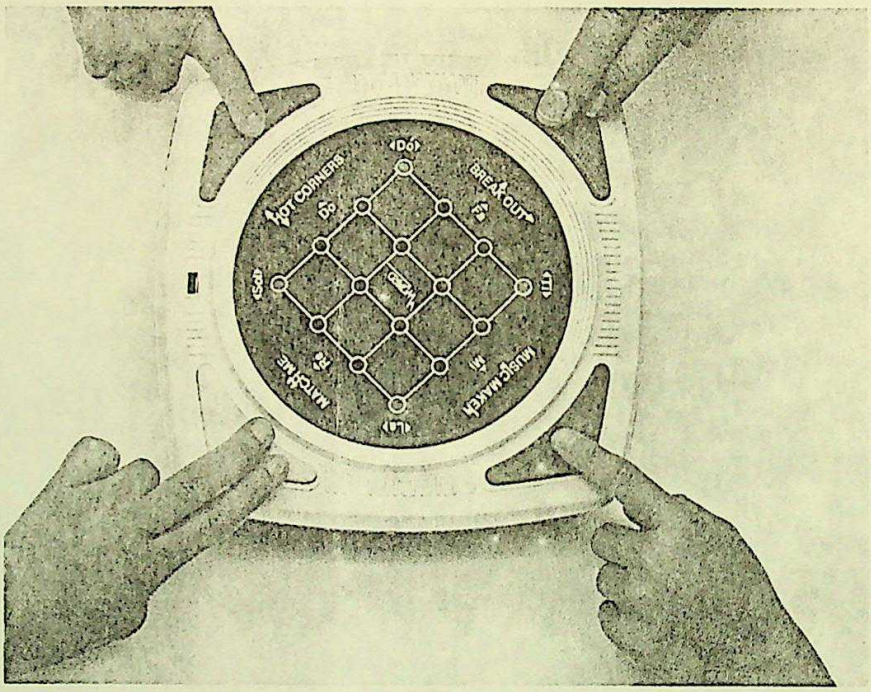






Top left, Coleco's Star Trek chase game combines licensing, electronics and a retail price under $30. Above, Mattel's Brain Baffler plays several different word games and is for solitaire or two player fun. Left, Waddington's Wizzard will be the benefactor of a heavy TV ad campaign. Opposite page, top left, Entex's Tennis Game has adjustable levels of play. Opposite, top right, Milton Bradley's Pocket Simon is the company's offering at an "approachable price." Opposite page, bottom left, is Azrak Hamway's Baseball at a wholesale price under $20. Opposite page, bottom left, Mego's Fabulous Fred plays nine different games.

sumer advertising program, according to Tim Huber, vice-president marketing for the company's electronics division. Mattel also hopes to implement several promotions similar to last year's Baseball promo held in conjunction with Gillette. During World Series time, Mattel offered a $3 rebate on its electronic baseball game if a customer showed proof of purchase from the game and Gillette razor blades.

Ideal is also putting together a promotion campaign for its new entry into the electronics game category, The Generals. Ideal is setting up a nationwide tournament for players of the game. A similar tourney has been very successful in the Philippines, where the game originated. Ideal also plans heavy TV for its other electronic games. Joe Namath and Jim Palmer will star in a commercial for Flash, and Rocky Graziano will take a few on the chin in a commercial for KO the Champ.

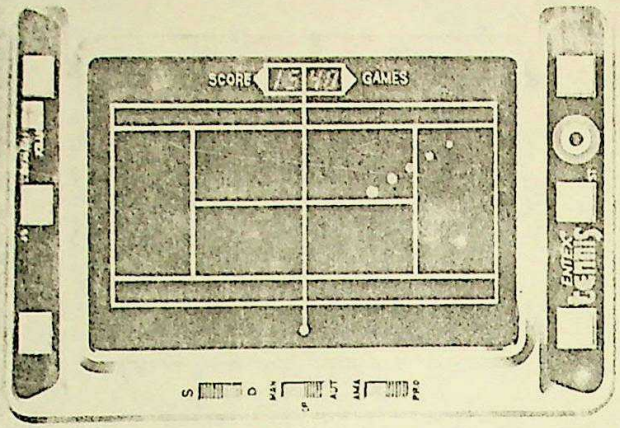
Another manufacturer of sports games, Tiger, is promoting its football game with full page ads in Pro Magazine, the official program sold at NFL football games. Tiger also plans spot TV in top 20 markets.

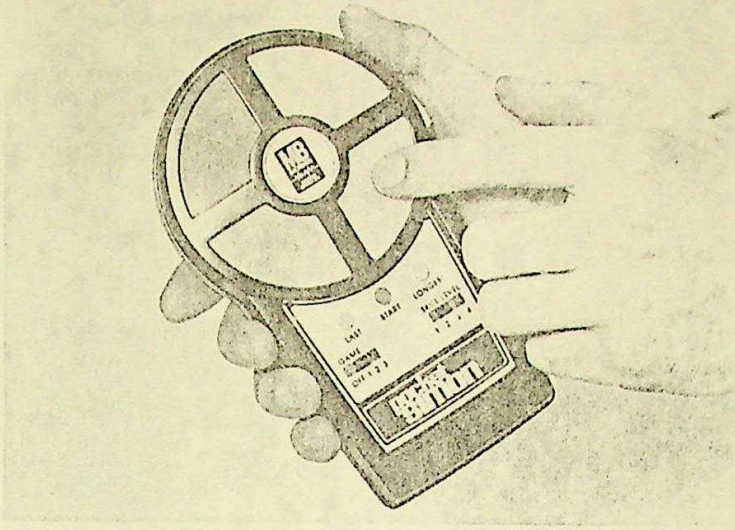
However, Tiger's print ad plan and similar plans formulated by many other manufacturers hit upon a sensitive issue in the promotion of electronic games: is print advertising more effective than television? "Print advertising is especially important in getting the adult market," says Ed Rivoir of Selchow and Righter, whose new Scrabble Brand Lexor is targeted at an adult audience. S&R plans an early print campaign to make an impression and then follow it up with TV in the fourth quarter.

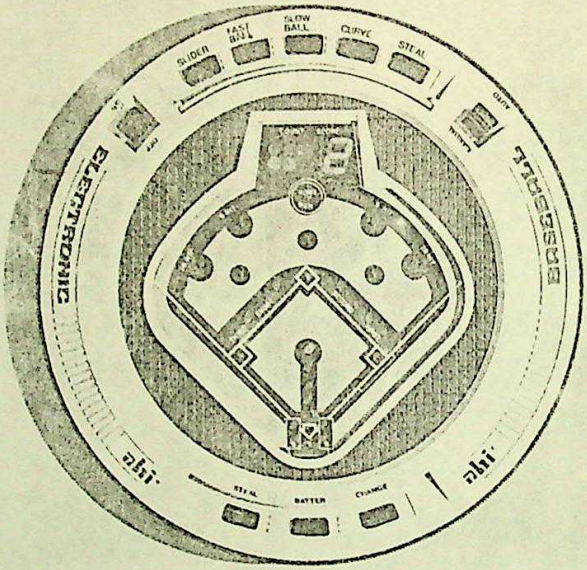
One company that is forsaking TV is Bandai America. "I haven't seen anyone who can fully demonstrate an electronic game and all its features in a 30 second TV commercial," says Andy Gatto of Bandai. "We're putting our money into posters and p-o-p displays."

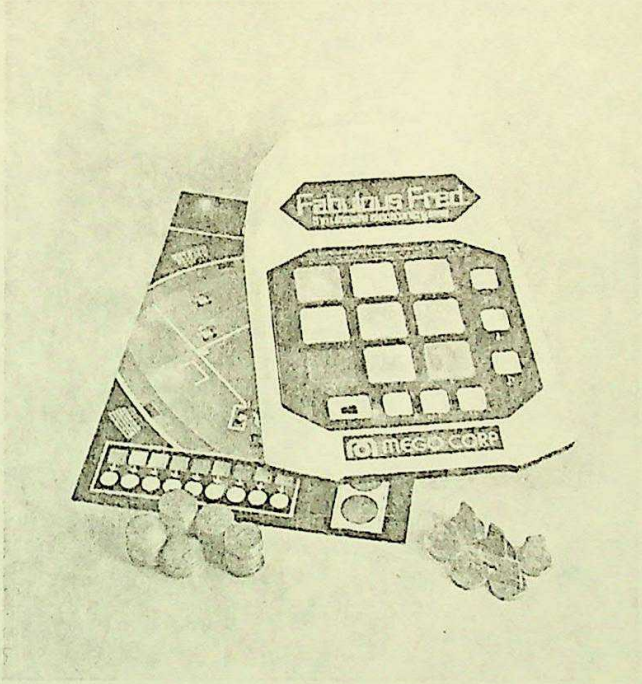
Another manufacturer who eschews television says that no TV advertising is actually a plus for the retailer. "With our games there's no TV and consequently no footballing of prices," he contends. "The retailer can get a full mark-up."

Jack Hirsch of Waddington Games, who is supporting his Wizard with $1.5 million worth of









TV advertising, says that TV can be an effective tool, but it should be used better. "It's a mistake to sell the technology — the nuts and bolts," he says. "You have to sell the fun of the game."

Whether a game is advertised on television or not, there are other ways for the medium to get the message across. Indicative of the new trends in marketing electronics, licensing is also making inroads in the category. Coleco is featuring a Star Trek chase game, while Bandai has Incredible Hulk and Spiderman games for children. Other licensed electronics include Castle's Name That Tune (from the TV show of the same name) and Marvel Superheroes pinall. Kenner was one of the first companies to combine licensing and electronics with the introduction of a Star Wars game last year.

Another critical marketing consideration mentioned by several manufacturers is price. Though the average price of an electronic game sold in 1979 was under $21 (see chart), it did represent an increase from 1978, and suggested retail prices on many items released for 1980 run upwards of $35.

However, some manufacturers are looking to keep some items at "approachable price points," according to Ditomassi of Milton Bradley. MB's Pocket Simon and Plus One, both new for 1980, have wholesale prices of $14.

Michael Katz of Coleco agrees that the best market will be in popularly priced games, though he estimates the cut-off price at the retail level will be around $50.

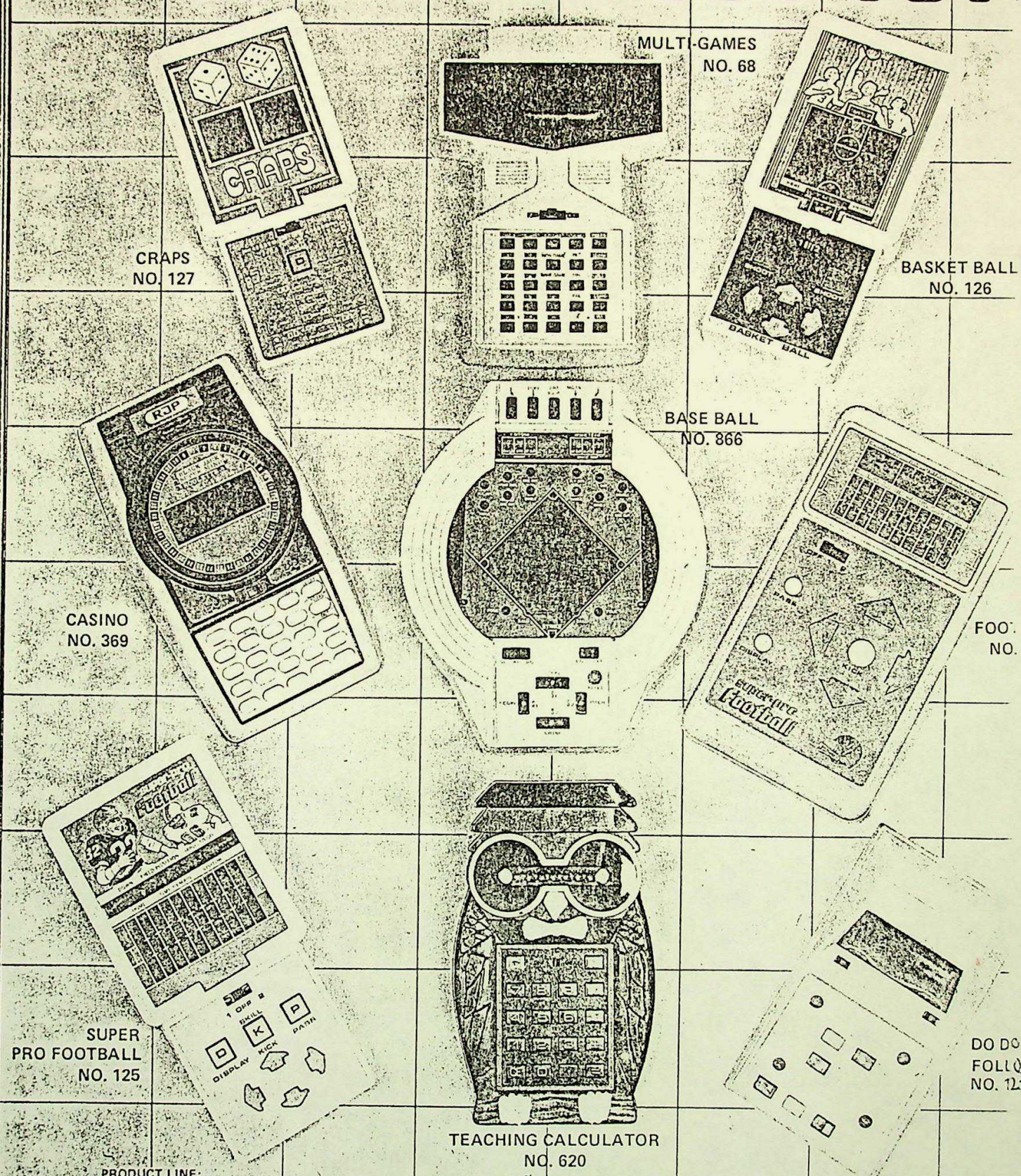
As marketing becomes more crucial, electronics manufacturers are even taking greater care with packaging. Barbara McDonald, the art director at LJN, reports that her company has revamped the packaging for its electronic games. "In the past, marketing and packaging have not been good," she says, "but I think you'll find companies looking to improve that area."

In fact, some companies, such as Invicta, have been conscious of packaging in the past. Invicta's Electronic MasterMind package was selected as Box of The Year by a design panel.

With the increased emphasis on packaging, there has also been a move towards p-o-p displays as manufacturers strive for placement and retailers look to make the most

HONG KONG ENTERPRISE rec'd 4/2/80

MICROPROCESSOR TOYS



PRODUCT LINE:

MICROPROCESSOR ITEM	MICROPROCESSOR ITEM	CALCULATOR	CALCULATOR	RADIO CONTROL CAR	PREMIUM ITEM
SUPERMIND	PIANO	EDUCATION	LED	MERCEDES BENZ 450	SELF GENERATED TORCH
FOOTBALL	BASEBALL	OWL	DIGITRON	MERCEDES BENZ 111	DIARY BOOK CALCULATOR
BASKETBALL	CRAPS	PENCIL BOX	LCD	ALFA ROMEO	KEY CHAIN WATCH
	SHOOTING GAME	WRIST WATCH	MINI CARD		
		PUPPY			

RJP ELECTRONICS LTD.

MAILING : G.P.O. BOX 1251 HONG KONG
FACTORY : 180 CONNAUGHT ROAD, WEST, 1/F., CHEUNG KA INDUSTRIAL BUILDING, HONG KONG.

OFFICE : WING SHING BLDG., 3RD FLOOR, 253 QUEEN'S ROAD CENTR HONG KONG.
TEL. : 5-442995, 5-434305-7 CABLE : RJPPTY
TELEX : 75489 ADATA HX
BANKERS : GRINDLAYS DAO HENG BANK LTD., MAIN OFFICE, HONG SHANGHAI COMMERCIAL BANK LTD.

THE ELECTRONIC GAM
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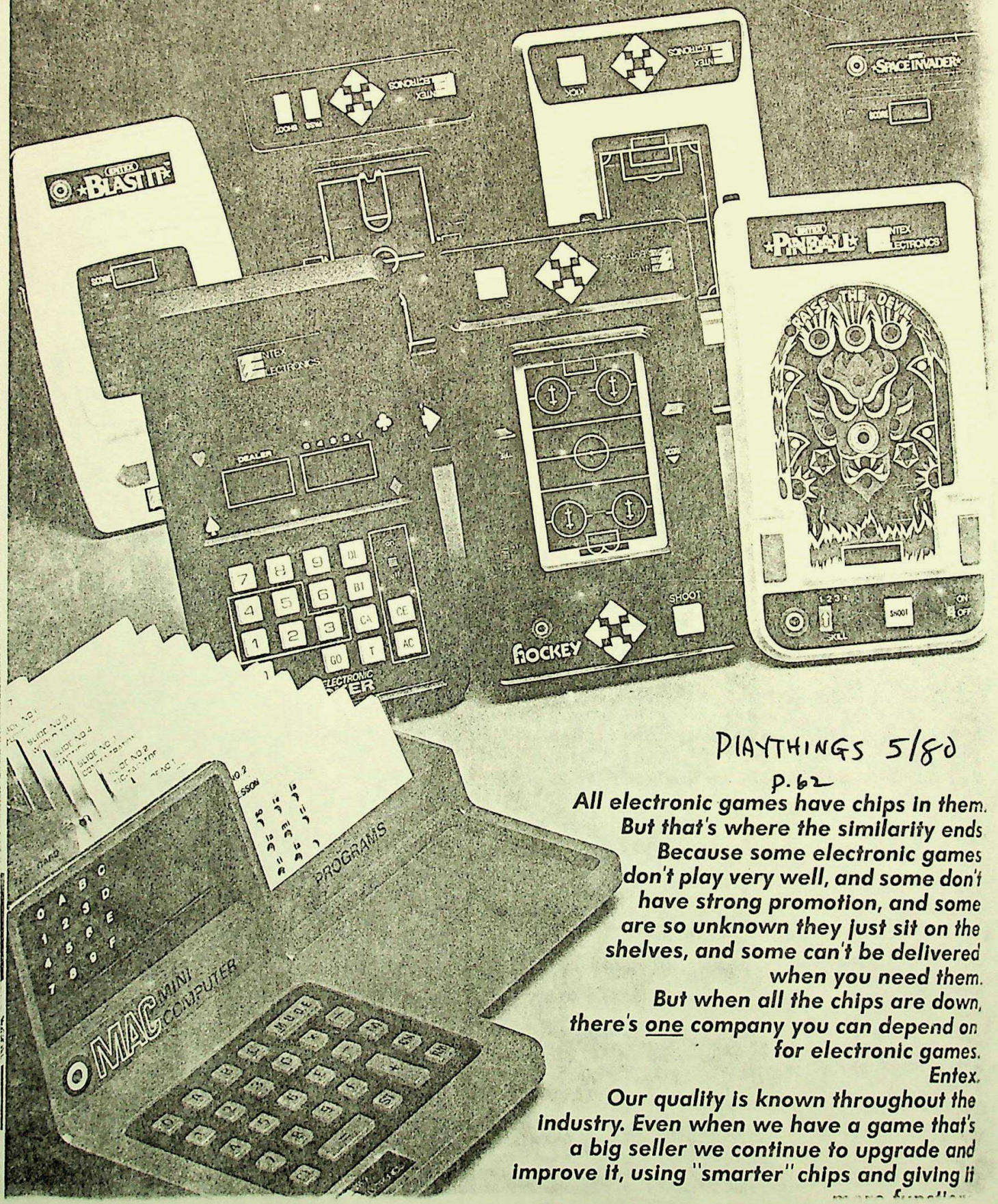


PLAYTHINGS 5/80

p. 62

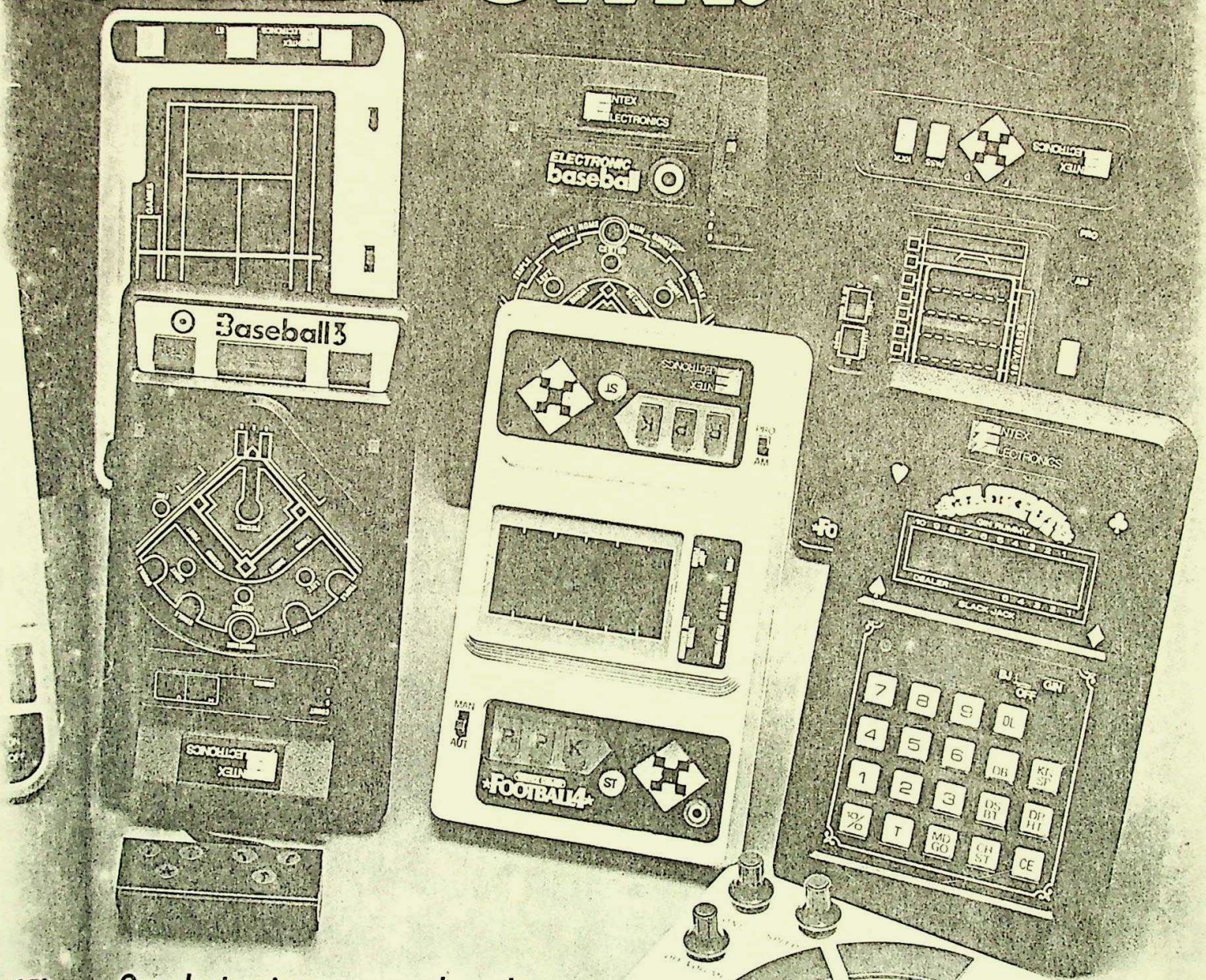
All electronic games have chips in them. But that's where the similarity ends. Because some electronic games don't play very well, and some don't have strong promotion, and some are so unknown they just sit on the shelves, and some can't be delivered when you need them.

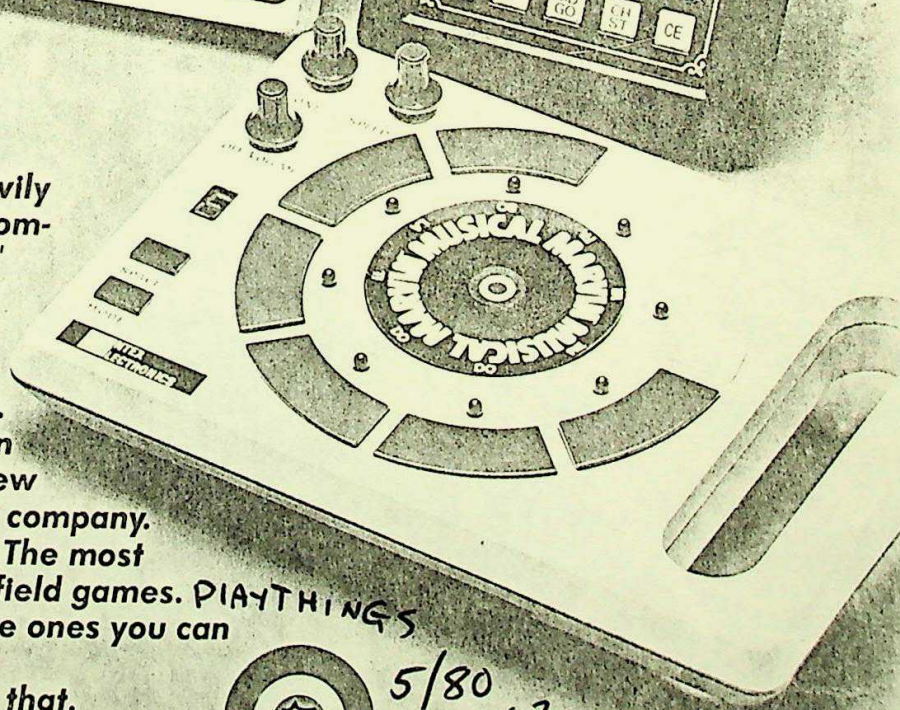
But when all the chips are down, there's <u>one</u> company you can depend on for electronic games. Entex.

Our quality is known throughout the industry. Even when we have a game that's a big seller we continue to upgrade and improve it, using "smarter" chips and giving it

62

ES YOU CAN COUNT ON
PS ARE DOWN.





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Our electronic games are heavily promoted with award-winning commercials that are real "stoppers."

At the end of last year, many electronic games were still on the shelves of retail stores. Entex Electronic Games sold out.

This year, we have 15 games in our line. We brought out more new electronic games than any other company. We have the most sports games. The most two-player games. The most full-field games.

Entex Electronic Games are the ones you can depend on.

And you can bet your chips on that.

PLAYTHINGS 5/80 p.63

©1980 Entex Industries, Inc., 303 W. Artesia, Compton, CA 90220.

D21/48 Computer Design, June, 1980 p.21

may operate via its own control mechanism, from a simple point to point protocol-transparent link to a shared multipoint packet network. This powerful concept, coupled with the almost totally independent interconnect characteristics of broadband, generates a useful and flexible medium for local area networks. The approach allows implementation of other services simultaneously on the available spectrum. In Mitrenet, an example of such a system, the packet network coexists with security, television, and point to point data transmission.

Broadband coaxial cable makes a tremendous variety of services available to network architects and designers. Given the ability to assign channels and data circuit functions with relative independence, many multimode configurations are possible. The simplest application, an asynchronous point to point data link, may reside "right next door" to computer file shipping channels on the spectrum. In the aggregate, usage may grow from 30 to 40 full duplex services supporting point to point terminal applications, to a heavily loaded system supporting everything from timesharing to file shipping, with no wiring changes required in the main system. These networks provide complete data communications services, supporting literally thousands of local users, as well as interconnection into more conventional long haul data communications utilities.

Rather conveniently, the appearance of all signals on the same coaxial cable simplifies broadband network monitoring. Spectrum surveillance equipment is an important aid in the tasks of monitoring signal levels and detecting failures. Monitoring systems may contain a realtime minicomputer with resident data base which may monitor signals, command loopback functions, and operate remote test equipment to isolate faults. They may also monitor, on a polled basis, the status of repeater units. It is much simpler to monitor signals on one coaxial cable than it is to contend with a complexity of baseband coaxial cables or twisted pairs. Existing technical control systems are capable of generating remote system status displays and of suggesting fault diagnosis techniques to repair personnel.

Other attractions in the broadband arena include frequency agile modems, capable of manual or computer-driven slot assignments; virtual trunk telephone modems; multiple channel packet networks, in which the traffic is offloaded to alternate channels during peak activity periods; and user-controlled multiprocessor access through channel assignment. The continuing development of these techniques makes broadband an even more attractive alternative for data network implementation.

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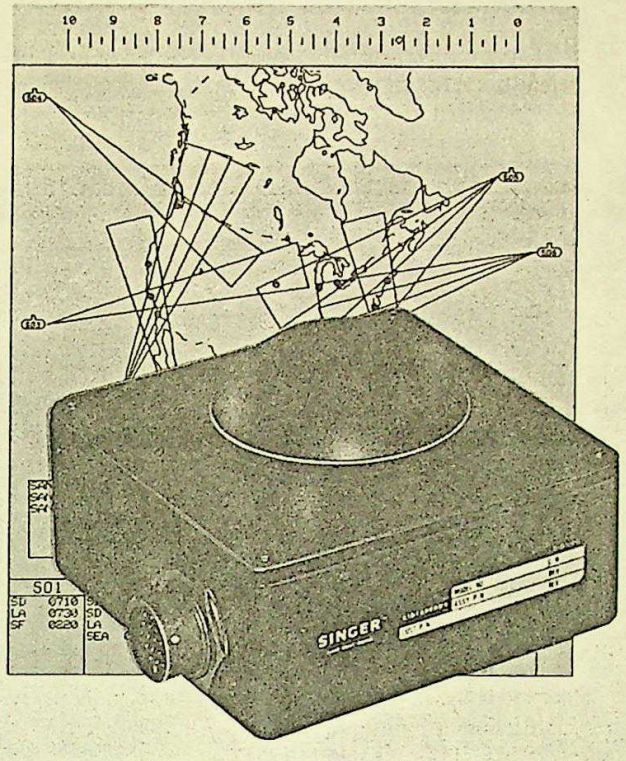
In next month's issue, Part 2 of this column discusses hardware components available for implementation of broadband local area networks.

Thinking CRT Cursor Control?



For Military or Rugged Industrial Applications

Librascope's Magnetic Trackball, with integral electronics, provides simultaneous X and Y scalar increments as inputs for digitally driven graphic displays, to position cursors, to add new data, or to modify existing data. Functions are generated by positioning two magnetic encoders with a hand driven ball to generate the orthogonal digital signals.

Designed for harsh environments, Librascope trackballs operate in the temperature range —55°F to +180°F and from sea level to an altitude of 50,000 feet. The unit complies with the environmental specifications of MIL-E-5272, Procedure 1 and MIL-T-5422.

Write or call for complete specifications. Librascope Division, The Singer Company, 833 Sonora Ave., Glendale, Calif. 91201. Telephone (213) 244-6541.

Librascope

a division of The SINGER Company

Librascope's magnetic encoders are the most reliable source of digital signals to represent a shaft angle. They offer long, maintenance free life in the harshest military or industrial environments. Output signals drive TTL integrated circuits directly. All models operate reliably in the temperature range —55°C to +125°C.

CIRCLE 14 ON INQUIRY CARD

Most manufacturers on time with first electronics shipments *continued from page 30*

product shipping, according to Don Nelson, director of national account sales.

Milton Bradley: Omni home entertainment center shown at Toy Fair has been dropped. There were some technical problems with the product and rather than proceed with limited production, the company has decided to push the product back to 1981. Super Simon and Pocket Simon are shipping now, Plus One should ship sometime this month, and Milton is scheduled to ship toward the end of July or the beginning of August.

Tiger: Ahead of schedule. Shipping all products offered at Toy Fair. Also, Tiger has decided to promote its Football and Playmaker Sports game on TV beginning Nov. 14 and running through Dec. 19. The ads will run in the top 30 markets.

Koala-T: Continued shipping on Mimic. On schedule with Fast on your Feet, Mini Match and Touch 'n' Hear Musical bear, all shipped in June. The Pet'ems musical plush bear should begin shipping this month, and the Multi Sport 7 game should be shipped in August. The Sound Saucer shown at Toy Fair has been dropped.

Bambino: On schedule with all items. "All promises we made at Toy Fair, we're keeping," says company spokesperson Debbie Sussan.

Entex: Ed Clewes, president of the company says the orders received so far this year were substantially larger than last year's. Consequently, he says Entex is a little behind schedule on shipments, but no more than a month.

Bandai: On time with all products. Began shipping in June as scheduled.

Mego: Invaders from Space, shown at Toy Fair, has been dropped from the line. The company has added the Time Out series to its line. The four different games, Toss Up, the Exterminator, Fireman, Fireman and Flag Man, feature a digital clock, digital scoring and two skill levels. Also, the series will be promoted on national TV. Fabulous Fred, a ten-in-one game is still in the line and should be shipped on time.

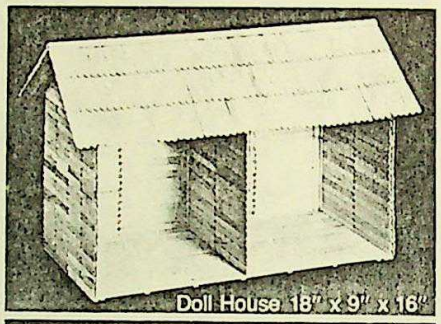
Parker Brothers: New items, Split Second and Bank Shot, will begin shipping in July and August. Also, Wildfire, an electronic pinball game, which was to be shipped last year, will begin shipping this summer with the other games. Parker has also stepped up its scheduled promotional campaign for its electronic lines. The company has slated a print campaign aimed at mothers, which will run in women's magazines beginning in August. Parker's electronics will also be promoted on network TV in prime time and kiddie slots.

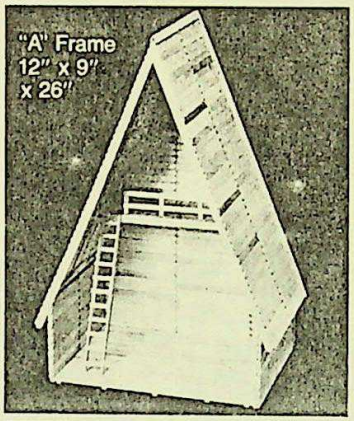
Mattel: Not available for comment at presstime.

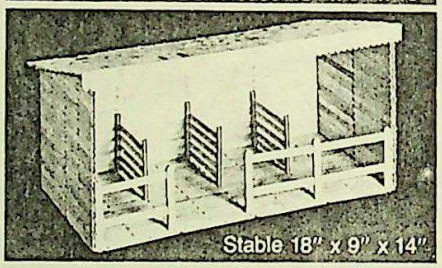
SticKraft™

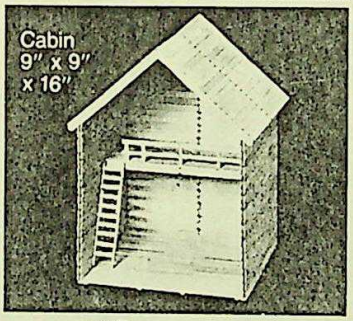
MINIATURES

BUILDING KITS
FURNITURE KITS









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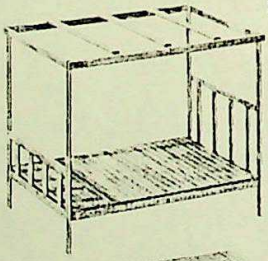
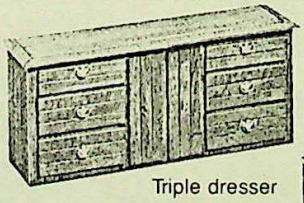
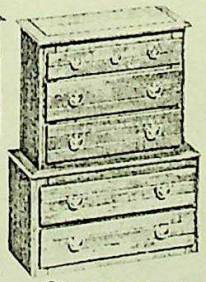


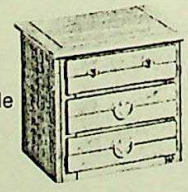
Double canopy bed



Triple dresser



Chest on chest



Night table

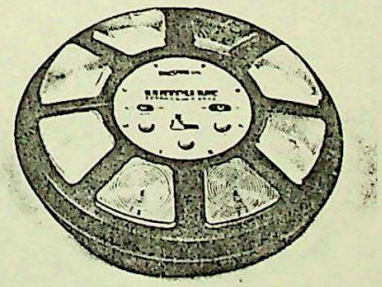
Kits come unfinished.
Hardware **not** included.

SticKraft - for ages 8 and up.
Instructions and glue are included.
All kits are precut and ready to assemble.

For color product sheets showing our full line and price list,
contact: J.M.P. Enterprises, Inc. P.O. Box 7482
Louisville, Ky. 40207 502-245-6656

(Circle No. 16 on Reader Inquiry Card)

Kingsford strikes a Match



Kingsford's tabletop Match Me

NEW YORK — Kingsford Ltd. has shattered the stereotype of only one on a match. The company has released two versions of its Match Me game, a tabletop size and a pocket size.

Match Me is a light and sound game which also functions as an electronic organ. The game can be processed to remember up to 32 notes. Both sizes of the Match Me game can play four games, with two different skill levels. Also, both games have suggested retail prices of under $30.

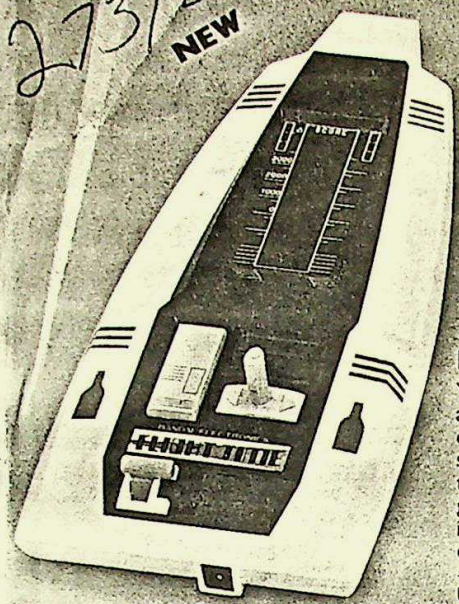
Fun for the Entire Family

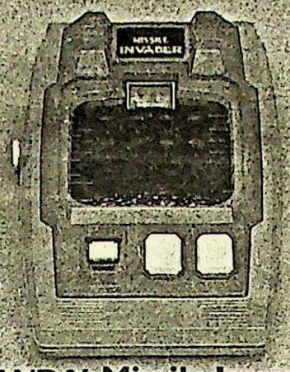
273/$56

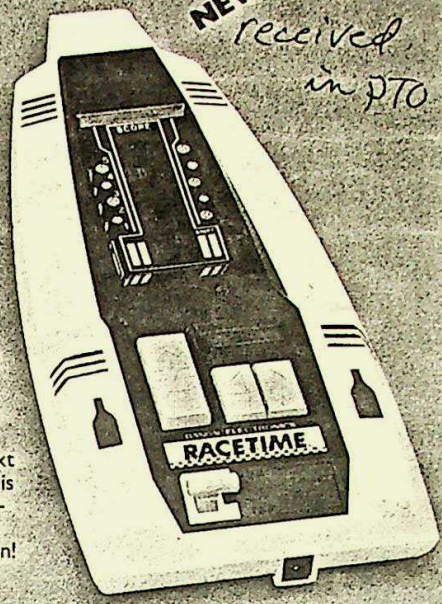
Aug. 21, 1980

NEW

received in PTO







NEW

BANDAI Missile Invader

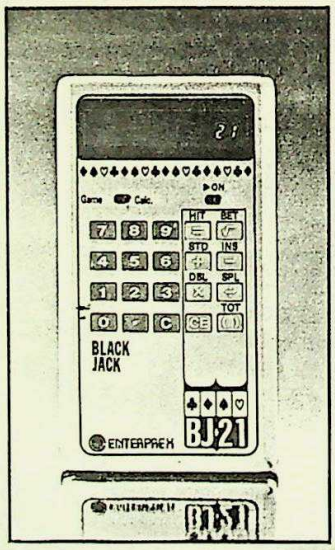
Your moon base is under attack! Missiles are coming at you from all directions! You dodge, evade, and return fire on the fearsome invaders. This time you've won—next time, who knows? Bandai's Missile Invader is great fun for kids and grownups alike; flashing lights and electronic sounds add to the excitement. You won't want to put it down! #BANINVD (3 lbs) **$24.95;**
Uses 9-volt battery #ER9VOLT (1 lb) $1.75 or #DS6908 Adapter (2 lbs) $6.95.

BANDAI Flightime

Imagine yourself as the pilot of a small plane. The sky around you is alive with other aircraft—crisscrossing and zigzagging through your airspace. You must guide your plane safely through the crowded airlanes. The craftier you are, the more points you can total; if you hit another plane, points are deducted. Flightime is a challenging test of your evasive skills, the risks increasing as the game progresses. Excellent for ages 7 and up.
#BAN8008 (3 lbs) **$34.95;**
Requires 4 #ERAA Batteries (2/pkg; 1 lb/pkg) $1.75/pkg.

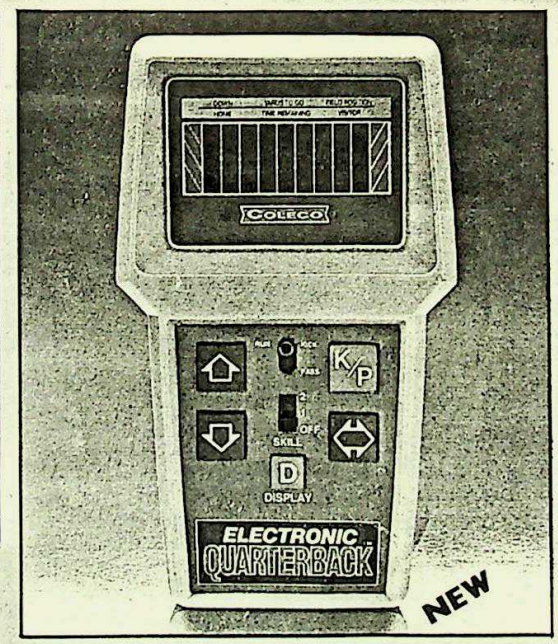
BANDAI Racetime

Road-racing demands split-second timing and total concentration–do you have what it takes? The Racetime electronic game offers a chance to prove it. The giant-size screen provides genuine road-racing thrills, right in the palm of your hand! "Real image" racers weave in and out in a challenging traffic pattern as you, the driver, attempt to maneuver your way through. If you crash, back you go to the starting point! The goal: drive as many miles as you can in the allotted time span. For ages 8 and up. #BAN8007 (3 lbs) **$34.95;**
Requires 4 #ERAA Batteries (2/pkg; 1 lb/pkg) $1.75/pkg.



Portable Blackjack

Comes in handsome wallet case. Includes 12-digit display, 10-digit junior slide rule calculator, parenthesis, simultaneous dealer/player display, automatic display of deck shuffle and accounting for bet, black jack, win, loss, split, insurance and double. Follows regular casino rules.
#ENBJ21 (3 lbs) **$24.95;**
Uses 3 "AAA" batteries #ERAAA 2/pkg (1 lb/pkg) $1.75/pkg.

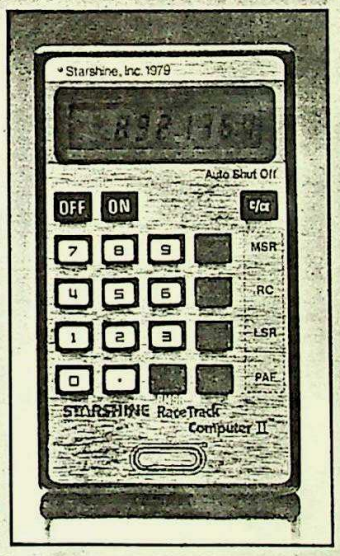


NEW

COLECO Electronic Quarterback

Computer Football in Your Hand

All the excitement of a real football game, contained in one hand-held unit. The computer controls the defense; you control the offense. Open holes in the defense with your blockers; set up a fast pass-play with your downfield receiver. Blocking, passing, running and kicking options are yours to command. Game even includes sound effects: referee whistles, and a victory song that's played when a touchdown is scored! Two levels of skill (semi-pro and pro); LED displays of time, score, downs, yards-to-go and field position. #COL2020 (3 lbs) **$34.95;** Requires #ER9VOLT Battery (1 lb) $1.75 or #DS6908 9-volt adapter (2 lbs) $6.95.



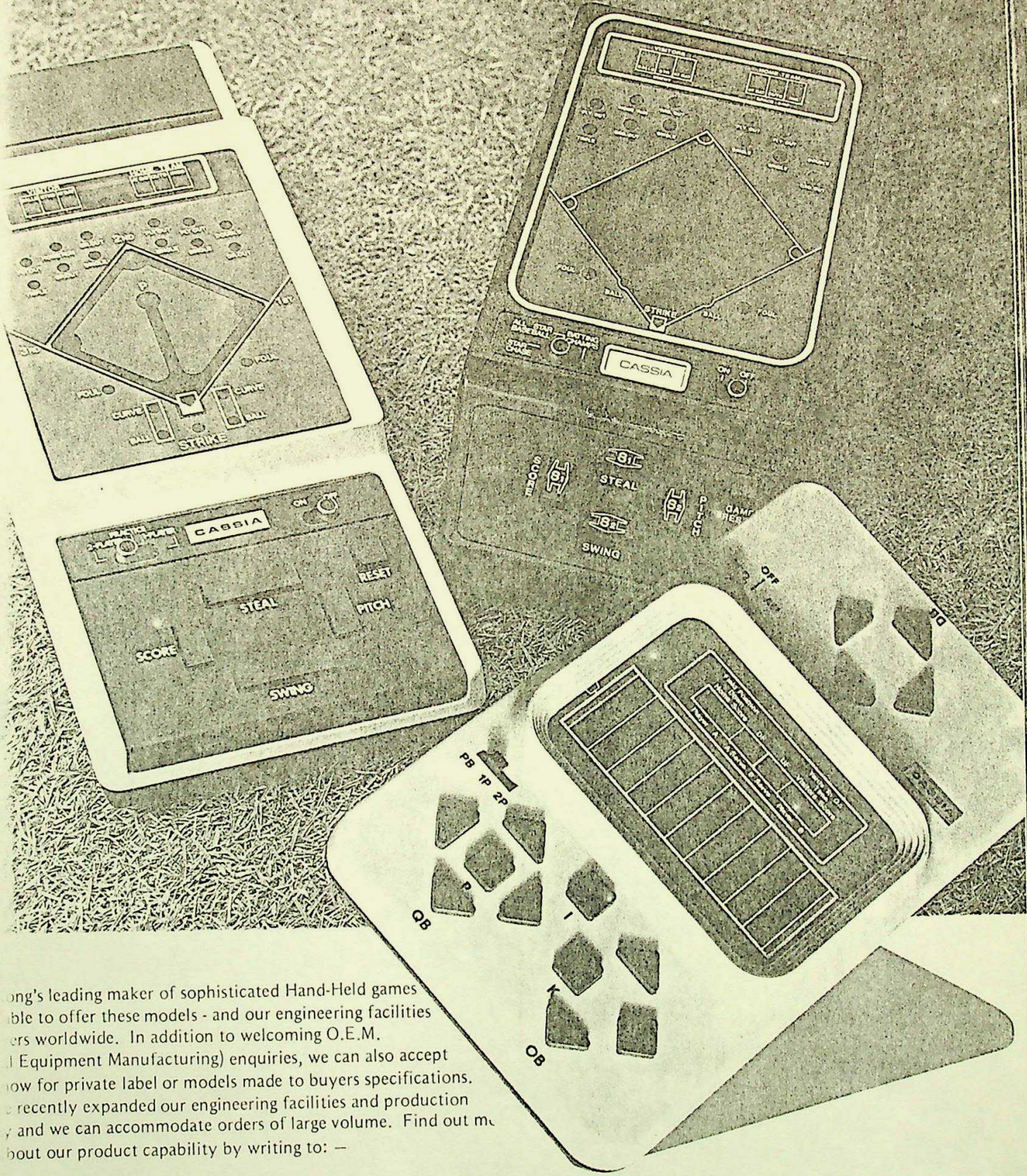
RaceTrack Computer II NEW

This exciting new calculator provides accurate ratings based on past performance data, then identifies and projects the real contenders. No handicapping knowledge required—RaceTrack Computer II figures performance rating instantly, even adjusts for varying track lengths. The horses with the highest ratings are most likely to win. Comes with handsome carrying case.
#RACE2 (3 lbs) **$29.95.**

HONG KONG ENTERPRISE
rec'd 10/6/80

CASSIA

XPERT IN HAND-HELD GAMES



ong's leading maker of sophisticated Hand-Held games
ble to offer these models - and our engineering facilities
ers worldwide. In addition to welcoming O.E.M.
l Equipment Manufacturing) enquiries, we can also accept
ow for private label or models made to buyers specifications.
recently expanded our engineering facilities and production
and we can accommodate orders of large volume. Find out m
bout our product capability by writing to: –

CASSIA ELECTRONIC PRODUCTS LTD.

6th Floor, Toppan Building, 22 Westlands Road, Quarry Bay, Hong Kong.
Tel: 5-644362 5-644372 Cable: "CASSIAELEC" HONGKONG Telex: 63782 CASSA HX

field
tronics
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uilding,

Kong.
FLD HX
LEC HK
103-4

①Solomon–104 Electronic Game

- Four exciting games:-
  1. Detective (Master Mind Type)
  2. Memory Challange (Simon Type)
  3. Music Companion (Organ/Music Maker)
  4. Mystery Path (Chance & Memory)
- Exciting playing field with 16 LED Matrix & 2 Digit Score
- D.C. 9V
- 190 x 115 x 50 mm

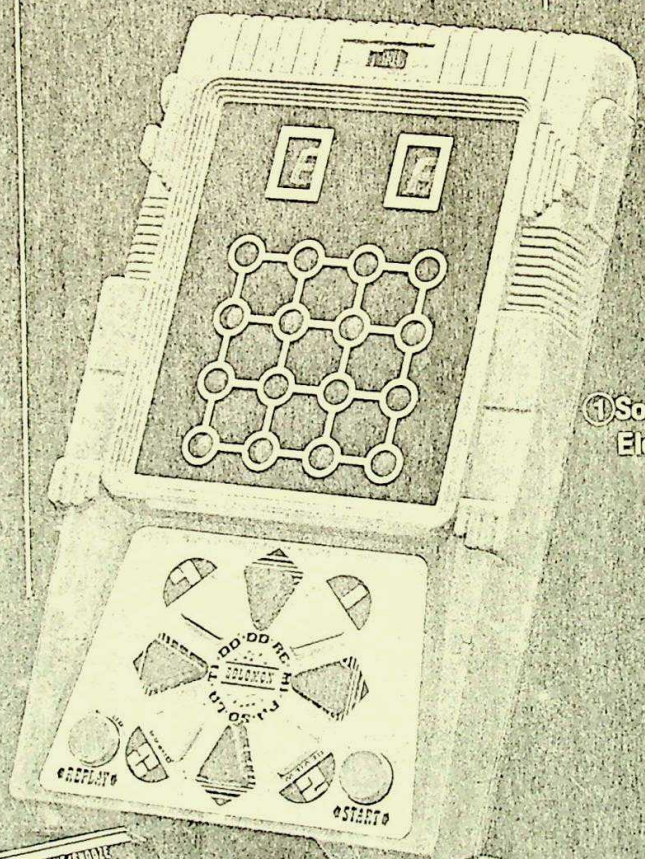
②TC–1000 LCD Alarm Clock

- Large Display
- Loud Alarm Sound
- Back-light
- Adjustable Viewing Angle
- Operated with 'AAA' Size Batteries

③LC–301 Traveller Alarm Clock

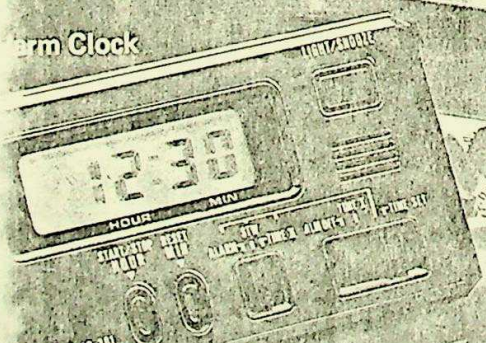
- Large LCD Display with Back-light
- 24 hr. or 12 hr. with AM/PM indicator
- Alternative Timer can be used as an Alarm Timer, Dual Time or a Stop-Watch
- Four minutes alarm with snooze function
- Powered by one Button-Cell 1.5V
- 103 x 50 x 8 mm
- Comes with Various Panel finish in Gold, Black, Chrome or Lacquer

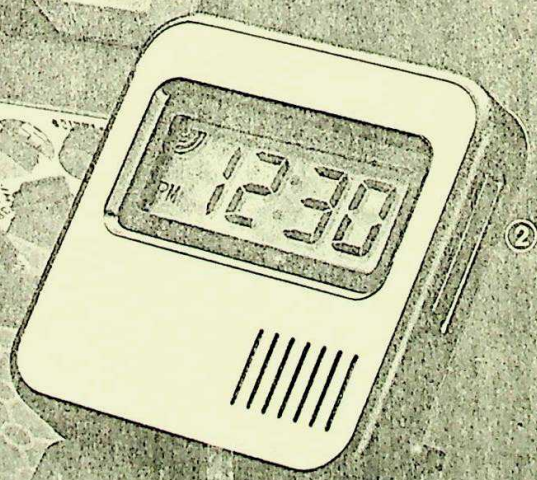
HONG KONG
ENTERPRISE 12/80



①Solomon–104
Electronic Game

rm Clock

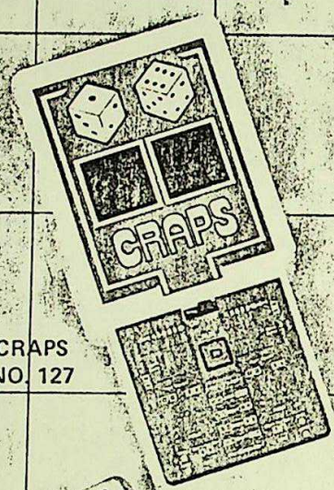




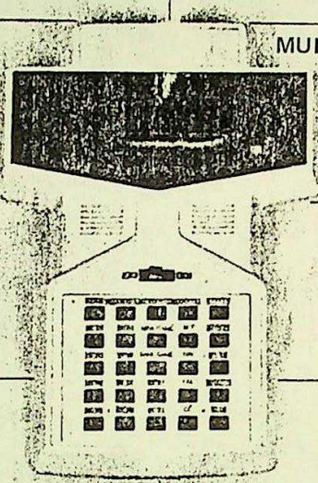
②TC–1000
LCD Alarm Clock

HONG KONG ENTERPRISE 12/8

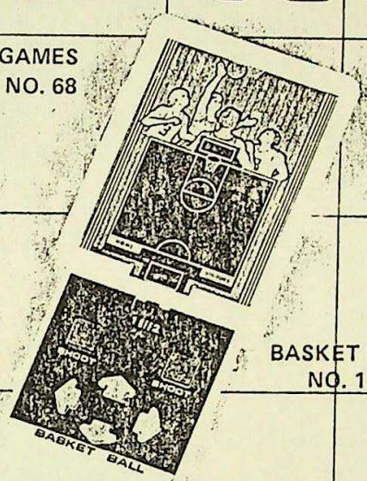
MICROPROCESSOR TOYS



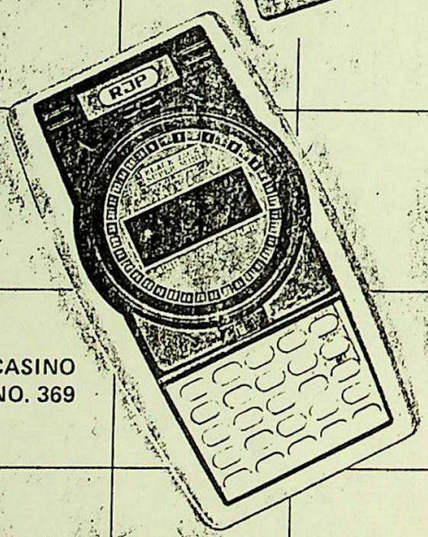
CRAPS
NO. 127



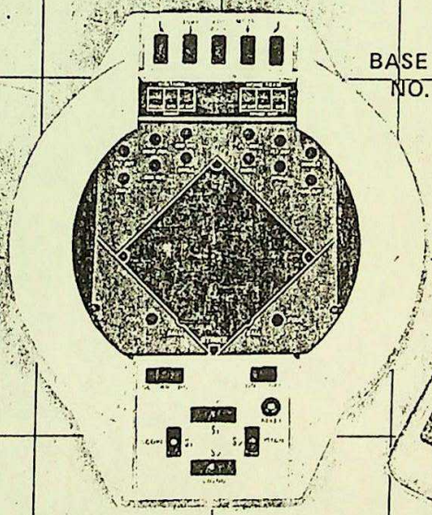
MULTI-GAMES
NO. 68



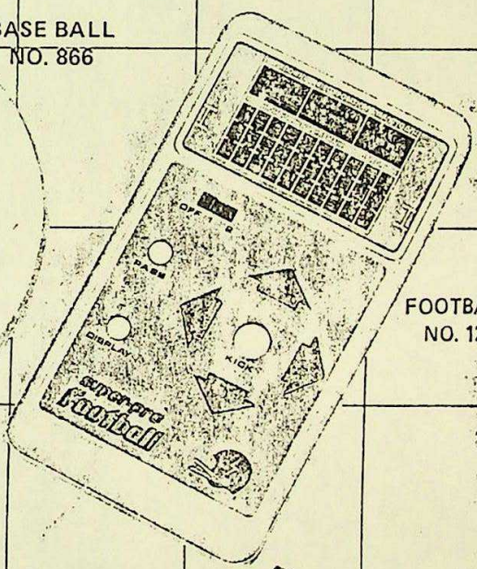
BASKET BALL
NO. 126



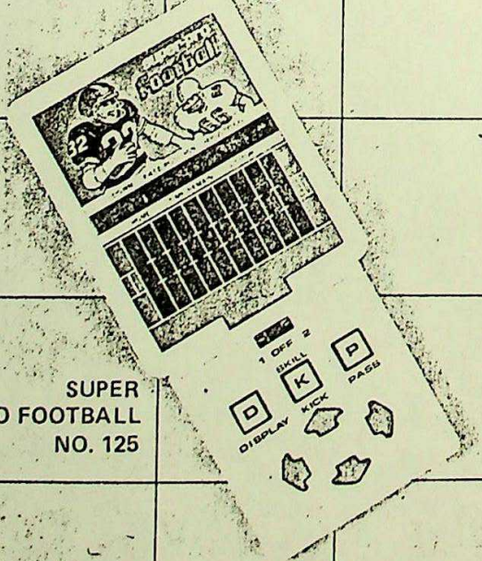
CASINO
NO. 369



BASE BALL
NO. 866

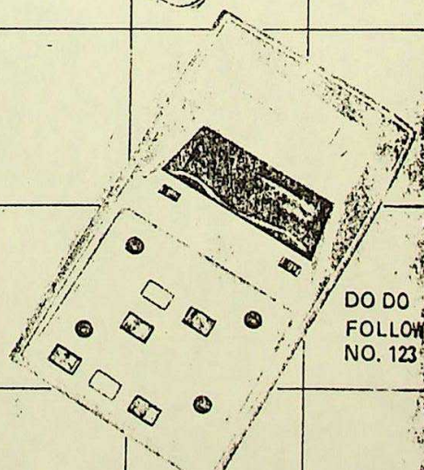


FOOTBALL
NO. 121



SUPER
PRO FOOTBALL
NO. 125

TEACHING CALCULATOR
NO. 620



DO DO
FOLLOW
NO. 123

PRODUCT LINE:

MICROPROCESSOR ITEM	MICROPROCESSOR ITEM	CALCULATOR	CALCULATOR	RADIO CONTROL CAR	PREMIUM ITEM
SUPERMINO	PIANO	EDUCATION	LED	MERCEDES BENZ 450	SELF GENERATED TORCH
FOOTBALL	BASEBALL	OWL	DIGITRON	MERCEDES BENZ 111	DIARY BOOK CALCULATOR
BASKETBALL	CRAPS	PENCIL BOX	LCD	ALFA ROMEO	KEY CHAIN WATCH
	SHOOTING GAME	WRIST WATCH	MINI CARD		
		PUPPY			

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OFFICE : WING SHING BLDG., 3RD FLOOR, 253 QUEEN'S ROAD CENTRAL HONG KONG.
TEL. : 5-442995, 5-434305-7 CABLE : RJPPTY
TELEX : 75489 ADATA HX
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SHANGHAI COMMERCIAL BANK LTD. CHEUNG WAN [illegible]

NEW GAMES FOR 1984

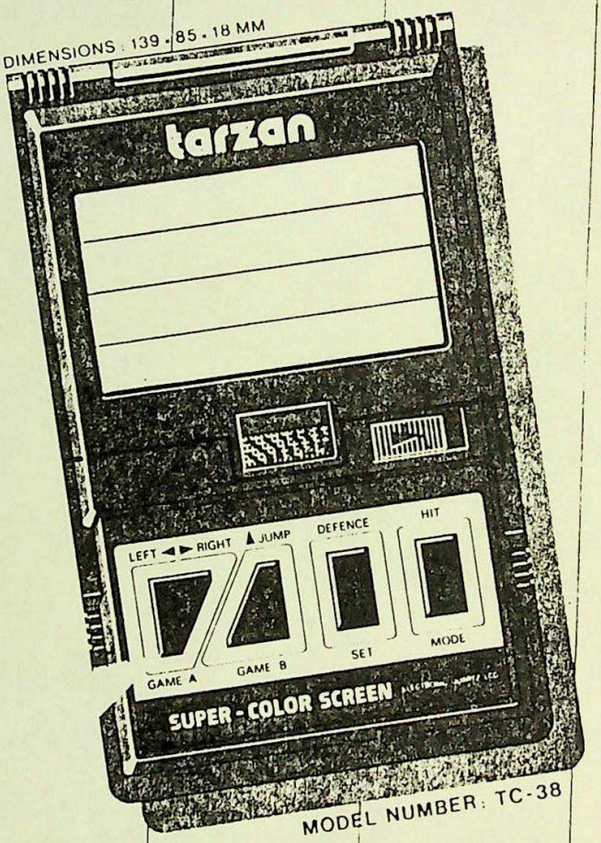
HONG KONG ENTERPRISE, FEB. P. 92

DIGITAL
ELECTRONIC
QUARTZ LCD

★ ★ ★ ★ ★

SUPER COLOR SCREEN

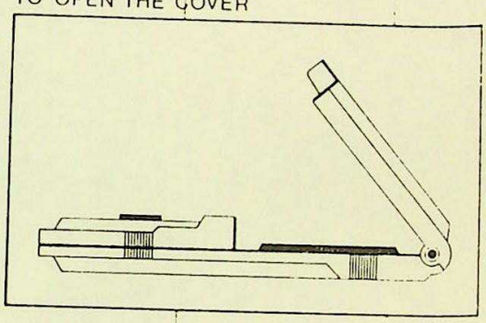
DIMENSIONS : 139 • 85 • 18 MM



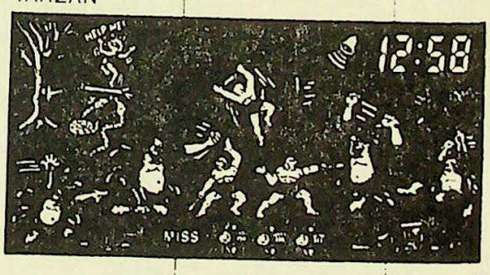
MODEL NUMBER : TC-38

Moving figures on the display in the past have been a simple dull black look but NOW with advanced technology - moving figures are in TRUE VIVID — CO OR

TO OPEN THE COVER



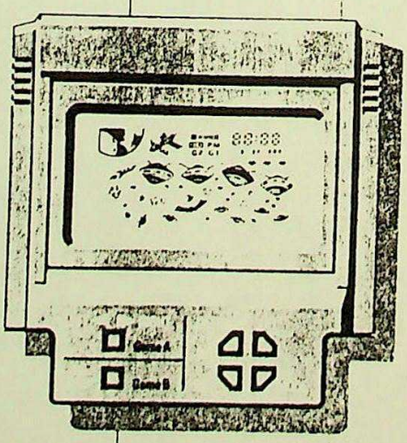
TARZAN



DIGI CASSE

★ ★ ★ ★ ★

The impossible is now possible. A hand held - L.C.D. game with INTERCHANGEABLE CARTRIDGES.



Ten cartridges available.

Each model colors available:

■ red ■ blue

DIMENSIONS : 82 • 66 • 19 MM

MODEL NUMBER TC-40

Ballanda Limited
(ELECTRONIC MANUFACTURER)

30 - 34, KWAI WING ROAD, F M L BUILDING
1ST/F, & 3RD/F, KWAI CHUNG, N T HONG KONG
TELEX 53909 BALDA HX TEL 0 264221 4(4 lines)

ield
onics
d.

Building,
Kong.
FLD HX
LEC HK
103–4

①Solomon–104 Electronic Game

- Four exciting games:-
  1. Detective (Master Mind Type)
  2. Memory Challange (Simon Type)
  3. Music Companion (Organ/Music Maker)
  4. Mystery Path (Chance & Memory)
- Exciting playing field with 16 LED Matrix & 2 Digit Score
- D.C. 9V
- 190 x 115 x 50 mm

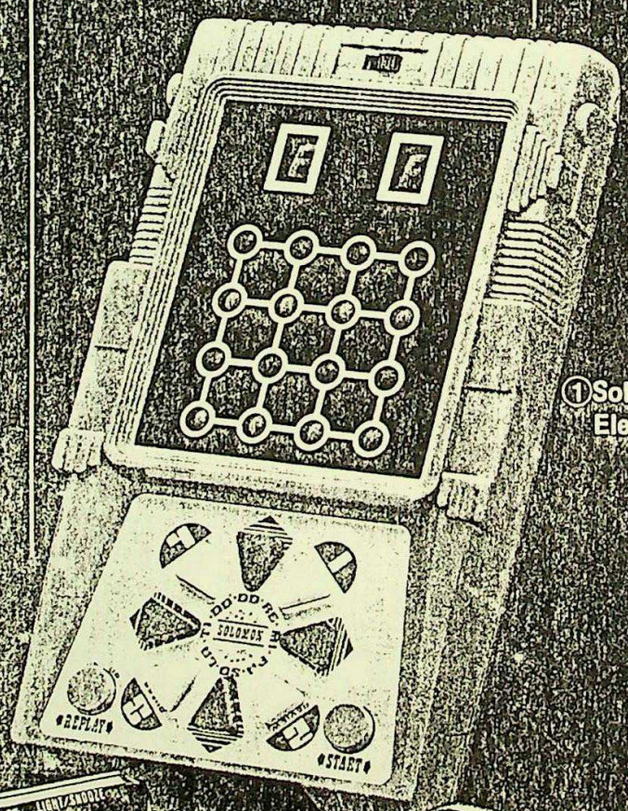
②TC–1000 LCD Alarm Clock

- Large Display
- Loud Alarm Sound
- Back-light
- Adjustable Viewing Angle
- Operated with 'AAA' Size Batteries

③LC–301 Traveller Alarm Clock

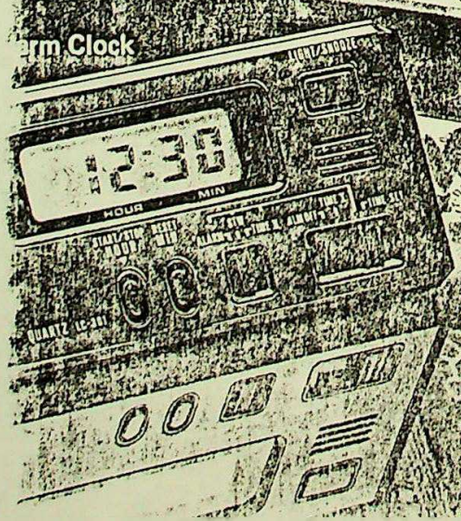
- Large LCD Display with Back-light
- 24 hr. or 12 hr. with AM/PM indicator
- Alternative Timer can be used as an Alarm Timer, Dual Time or a Stop-Watch
- Four minutes alarm with snooze function
- Powered by one Button-Cell 1.5V
- 103 x 50 x 8 mm
- Comes with Various Panel finish in Gold, Black, Chrome or Lacquer

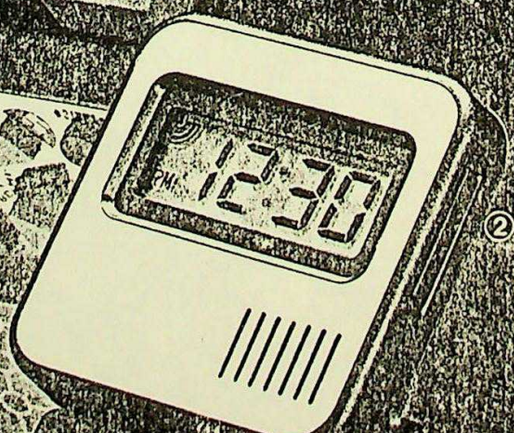
HONG KONG
ENTERPRISE



①Solomon–104
Electronic Game

rm Clock





②TC–1000
LCD Alarm Clock

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1980 CATALOG OF TOYS

See inside cover for Index

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FRONT PAGE

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ELECTRONIC SPORTS GAMES

SEARS TOYS CAT

Remote control pitching unit for (1)

(1) Electronic Baseball. You can be the batter, or try your hand as a big league pitcher and show off your fastball. 5 different pitches: if you're playing alone, use "computer" pitcher; or with another player, pitch fastballs, changeups, curves, sliders or knucklers. Remote control pitching unit lets you conceal your pitching strategy. LED readout keeps track of all balls, strikes, outs, base runners and score. You'll see flashing lights and hear a different sound on every play. Watch the players "run" around the diamond on a hit. Once you've hit the ball, computer decides if you'll score. No TV set needed. Includes scoring sheets, instr.
CONSTR: Plastic. Measures 8¾x6¼x1¼ in. high.
FOR AGES: 6 years to adult.
ORDER INFO: Uses 3 "AA" batteries, not included; (order packages below). Warranted by Entex Industries; for free copy, see page 322.
49 TH 62275—Shipping weight 1 lb. 4 oz. $28.47
Package of 2 "AA" Alkaline Batteries
49 C 46819—Shipping weight 2 oz. ..... Pkg. $1.19
Package of 2 "C" Alkaline Batteries
49 C 46839—Shipping weight 5 oz. ..... Pkg. $1.39

(2 and 3) Electronic Hockey and Soccer. Hand-held electronic games let you play against another player or computer on the ice or playing field. You control the offense by moving puck or ball down field, setting up shot, then shooting. Your opponent or the computer attempts to block or intercept puck or ball on defense. Blips of light represent each player and blinking light blip the puck or ball. Both games feature special electronic sound effects, LED position indicators, digital scoring, automatic timing, 4 direction keys and shoot button.
CONSTRUCTION: Plastic, each 8¾x5¼x1¾ inches high.
FOR AGES: 6 years to adult.
ORDERING INFORMATION: Each uses 3 "AA" batteries, not included (order packages at left). Warranted by Entex Industries, Inc.; for free copy, see page 322.

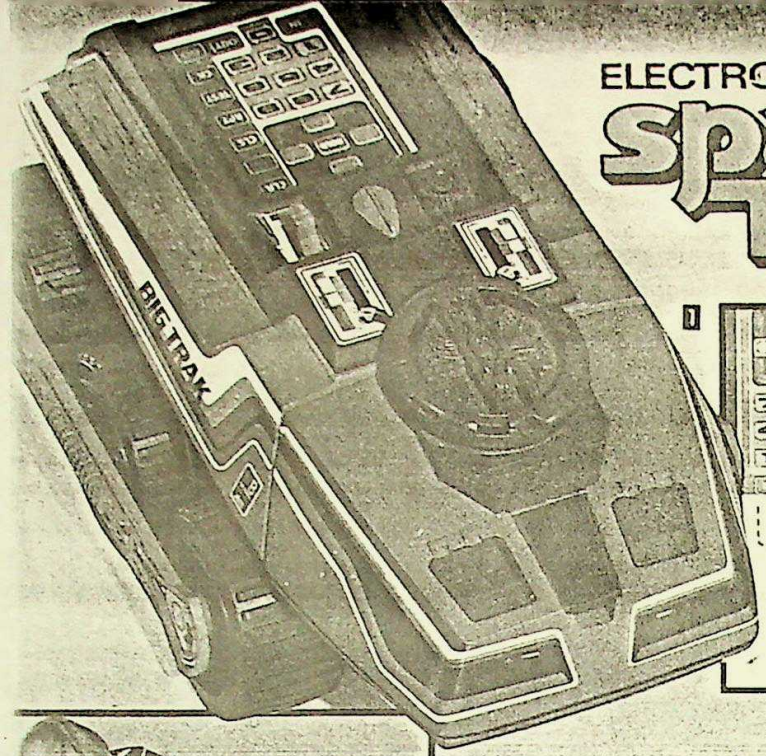
(2) Electronic Hockey Game
49 TH 65777—Wt. 1 lb. 7 oz. $29.97

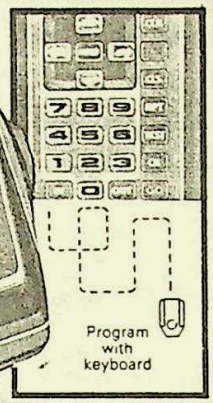
(3) Electronic Soccer Game
49 TH 65779—Wt. 1 lb. 7 oz. $29.97

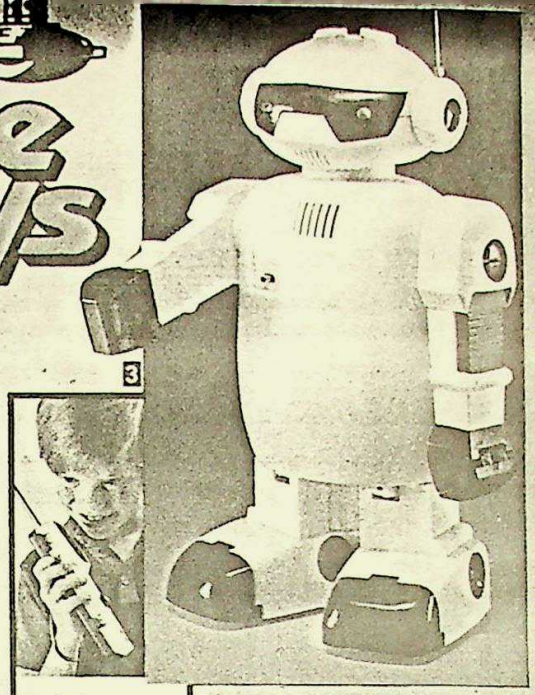
(4) Digital Diamond. A push-button 2-player baseball game. Pitcher can throw fastball or curve, batter can hit or miss. If it's a hit, digital light goes into field. The fielder-pitcher then pushes button to see if it's a single, double, triple, out or home run! Scoreboard registers score, men on base, balls, strikes, outs. No TV set needed.
CONSTR: Plastic, 8¾x6x2½ inches high.
FOR AGES: 6 years to adult.
ORDERING INFO: Uses 2 "AA" batteries, not included (order package at left).
49 TH 65043—Shipping weight 1 lb. .. $11.99

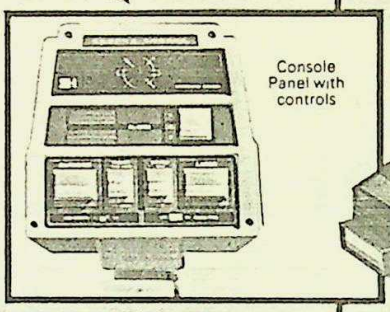
(5) Digital Derby Auto Raceway. How many laps can you race before time runs out? Steer, shift, race against other drivers but if you crash, the alarm flashes and costs you laps.
CONSTR: Plastic, 8¾x6x2½ in. Lap counter, reset button, automatic timer. For 1 player.
FOR AGES: 6 years and up.
ORDERING INFO: Uses 2 "C" batteries, not included (order package at left).
49 TH 62006—Wt. 1 lb. 3 oz. $14.27

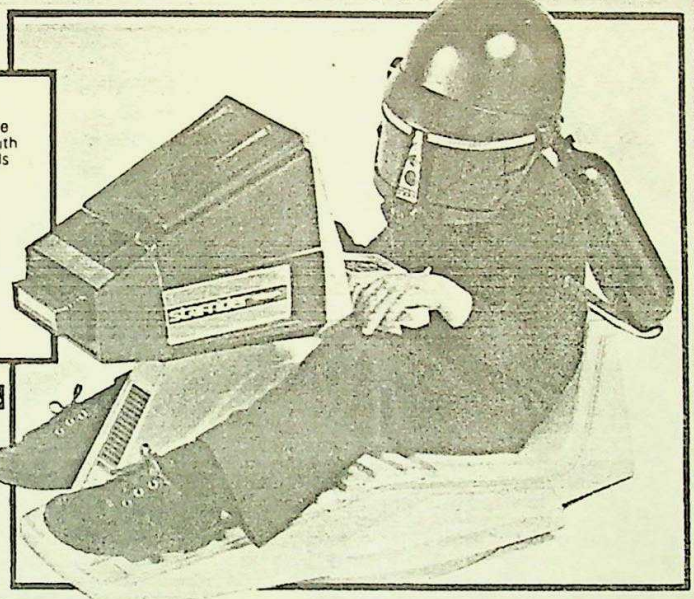
ELECTRONIC space Toys

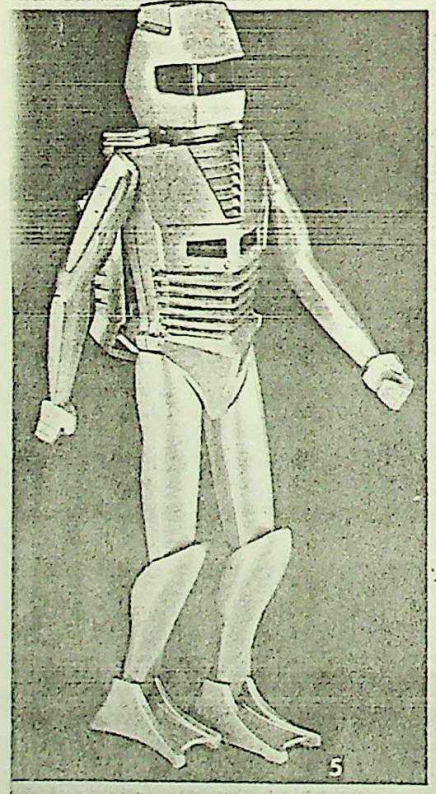


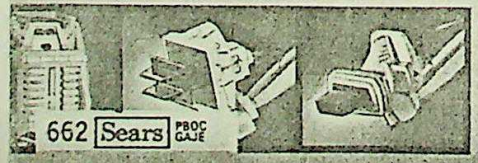












NOTE: Items (1), (3), (4) and (5) warranted by manufacturer. To write for free copy, see page 322.

SEARS TOYS 1980

(1) Milton Bradley's Big Trak™
Send Big Trak over lunar landscapes in search of moon monsters: then stun them with your laser. Program the Big Trak space vehicle to go forward, backward, turn left and right, rotate 360° and even fire laser guns! Big Trak can also be programmed for Big Trak Transport Trailer (not incl., sold below).
CONSTR: Plastic, metal, 13x8⅞x6 in. high.
AGES, ORDER INFO: 8 years to adult. Requires 9-v. battery, 4 "D" batteries (not incl., order at right).
49 TH 58289—Shpg. wt. 4 lbs. 11 oz. **$31.97**

(2) Milton Bradley's Big Trak™ Transporter Trailer
Haul interstellar equipment in the Big Trak Transporter Trailer attached to the Big Trak (not included, sold above). Can be programmed by Big Trak to dump automatically.
CONSTR: Plastic, metal. 17⅝x8⅝x7 in. high.
FOR AGES, ORDER INFO: 8 years to adult. Requires "D" battery (not incl.; order package at right).
49 TH 58287—Shpg. wt. 3 lbs. 11 oz. **$10.97**

(3) Mattel's Sir Galaxy™ Radio Control Robot
Sir Galaxy walks, talks, turns right or left, flashes his eyes and makes cosmic sounds at your command! Hand-held radio control transmitter doubles as a walkie-talkie; lets you project your voice thru robot for two-way conversation.
CONSTRUCTION: Plastic, 14 inches tall. Arms pose; hands grasp objects.
AGES, ORD. INFO: 5 yrs. to adult. Requires 3 "D" batteries, two 9-v. batt. (not incl.; order at right).
49 TH 58556—Shpg. wt. 5 lbs. 4 oz. **$64.97**

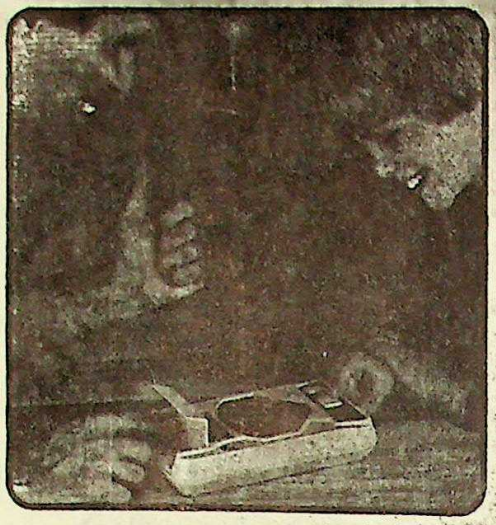
(4) Playskool's Star Rider™ Space Vehicle
Star Rider has all the controls, switches, visual and sound effects to transport a child to the outermost galaxies. Child controls Star Rider completely: using volume control switch for sound control; flipping buttons for "rocket boosters," "laser weapon," "explosion hit," "warp drive," and "emergency." Star Rider pivots 360°, has comfortable "astronaut seat."
CONSTR: Plastic, 30 3/16x16⅛x20 in. high.
AGES, ORDER INFO: 3 to 9 yrs. Requires 2 "D" batteries, 9-v. battery (not incl.; order below). Partly assembled. Instructions incl. Astro Explorer Play Set shown on child is not included, order on page 621.
Shipping weight 16 pounds.
79 TH 87239L. **$48.88**

(5) Parker Brothers ROM™ . . . the Space Knight
ROM has micro-electronic circuitry that enables him to scan the area with lighted eyes, "breathe" realistically from his respirator and make lights flash and sounds with his Energy Analyzer. Includes 3 detachable electronic accessories with light and sound effects; Rocket Pods, Translator and Neutralizer.
CONSTRUCTION: Plastic with flexible joints. 14 inches tall.
FOR AGES, ORDER INFO: 6 yrs. and up. Requires 9-v. battery (not incl.; order below).
49 TH 58121—Shpg. wt. 1 lb. 8 oz. **$18.97**

DieHard Alkaline "D" Batteries. Package of 2.
49 C 46849—Shipping weight 10 oz. . . . Pkg. **$1.59**

DieHard Alkaline 9-volt Battery.
49 C 46859—Shipping weight 2 oz. . . . Each **$1.49**

SEARS XMAS CAT. 1980



These 2-player

electronic Sports games

let you and your opponent play at the same time

All have both DEFENSE and OFFENSE controls and "players" are so maneuverable you can simulate the exciting, realistic action of your favorite real-live sports game

Your choice **$29.95** without batteries

- Play against a friend or the computer . . . . develop offensive and defensive strategies
- Realistic electronic sounds add to the excitement
- LED readouts display all the game action

(1) Team Play Basketball. *Was $37.95 in our 1980 "J" Summer Book, page 238.* Five offensive players pass the ball, setting up to shoot a basket before the clock runs out. Shoot jump shots or pass inside for a lay-up. Defense can block and rebound. LED display shows score, time remaining and "24-second" countdown. 2 skill levels.
CONSTR: Solid-state, plastic case. 9¼x3¾x1⅜ in.
FOR AGES: 8 years to adult.
ORDER INFO: Requires one 9-v. battery or AC adapter, not included, order at right. Warranty on facing page.
49 N 65683—Shipping weight 9 ounces $29.95

(2) Team Play Hockey. *Was $37.95 in our 1980 "J" Summer Book, page 238.* 5 player offense passes puck, setting up wingmen or center for a shot. Defensive player and goalie block shots and rebound. LED score, time, countdown. 2 skill levels add to the excitement.
CONSTR: Solid-state, plastic case. 9¼x3¾x1⅜ in.
FOR AGES: 8 years to adult.
ORDERING INFO: Requires one 9-volt battery or AC adapter, not incl., order at right. Warranty, facing page.
49 N 65684—Shipping weight 9 ounces $29.95

(3) Team Play Soccer. 5-player offense passes ball, setting up team mates for a shot at goal. Defensive player and 5-position moveable goalie block shots and take the ball on the rebound. LED display shows score and time remaning in game. 2 skill levels add to the excitement.
CONSTR: Solid-state, plastic case. 9¼x3¾x1⅜ in.
FOR AGES: 8 years to adult.
ORDER INFO: Requires one 9-v. battery or AC adapter, not included, order at right. See warranty on facing page.
49 N 65685—Shipping weight 9 ounces $29.95

(4) Offense/Defense Baseball. Human or computer pitcher can throw fastballs, changeups, curves, sliders or knucklers. Batter can steal bases or score with a sacrifice fly. Hit the ball for a home run, triple, double, single, outfield fly or infield out. LED display shows score, balls, strikes, outs and base runners. Score sheet incl.
CONSTR: Solid-state, plastic case. 8¾x6¼x1¼ in.
FOR AGES: 6 years to adult.
ORDER INFO: Requires 3 "AA" batteries or AC adapter, not included, order at right. Warranty on facing page.
49 N 65094—Shipping weight 1 pound 4 ounces . . $29.95

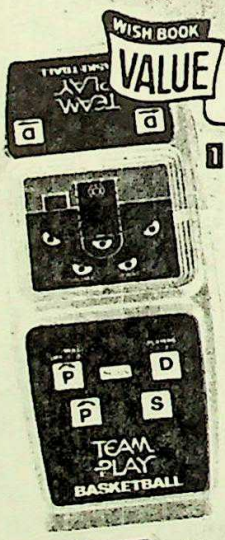
AC Adapter for (1 thru 3) and Football game, facing page
ELECTRICAL INFO: UL listed. 9-volt battery clip tip included. 110–120-volt. 60-Hertz AC. 6-ft. cord. Not for children under 8 years.
49 N 65244—Wt. 6 oz. $5.89

AC Adapter for (4) (not shown). Insert adapter plug into game jack and plug wall pack into 110–120-volt wall outlet. No batteries are required when adapter is used.
ELECTRICAL INFO: UL listed. 110–120-volts. 60-Hertz. AC. 7½-ft. cord. Not for children under 8 years.
49 N 65103—Wt. 5 oz. $5.89

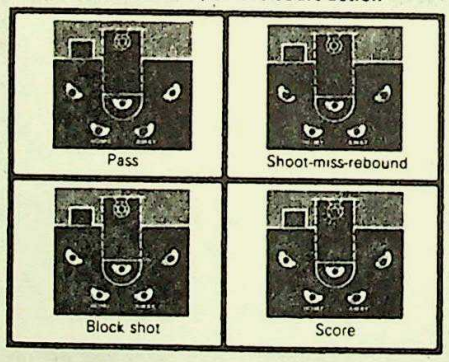
Alkaline 9-volt DieHard Battery
49 N 30949—Wt. 2 oz. . Each $1.99

Alkaline "AA" DieHard Batteries
Package of 2.
49 N 30909—Wt. 2 oz. . Pkg. $1.69

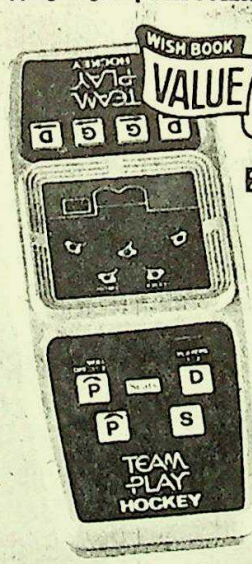
WISH BOOK VALUE **Cut $8** Team Play Basketball



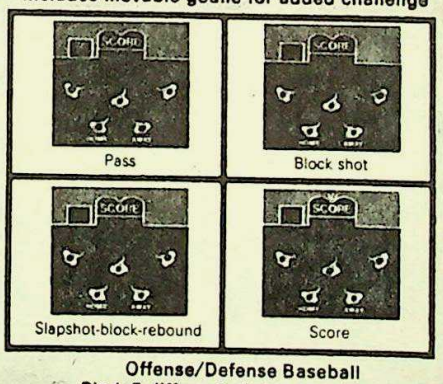
1 For authentic, on-the-court action

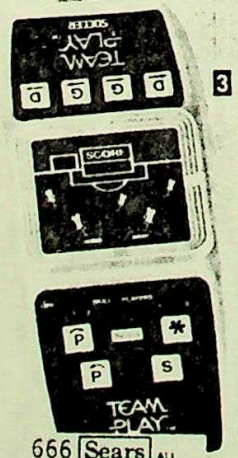


WISH BOOK VALUE **Cut $8** Team Play Hockey

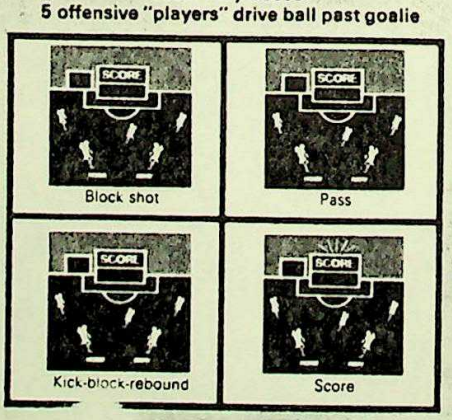


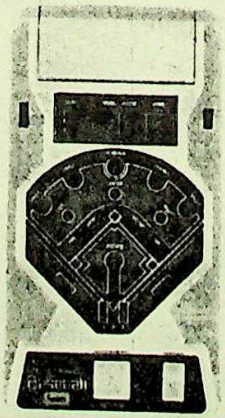
2 Includes movable goalie for added challenge



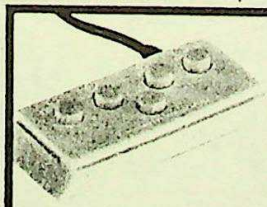


3 Team Play Soccer
5 offensive "players" drive ball past goalie

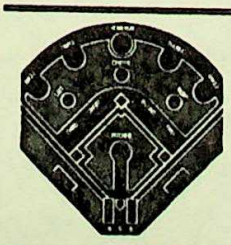




4 Offense/Defense Baseball
Pitch 5 different pitches, steal bases



Remote control prevents opponent from seeing your strategic pitches



Watch the game action and keep track of runners on authentic LED playing field

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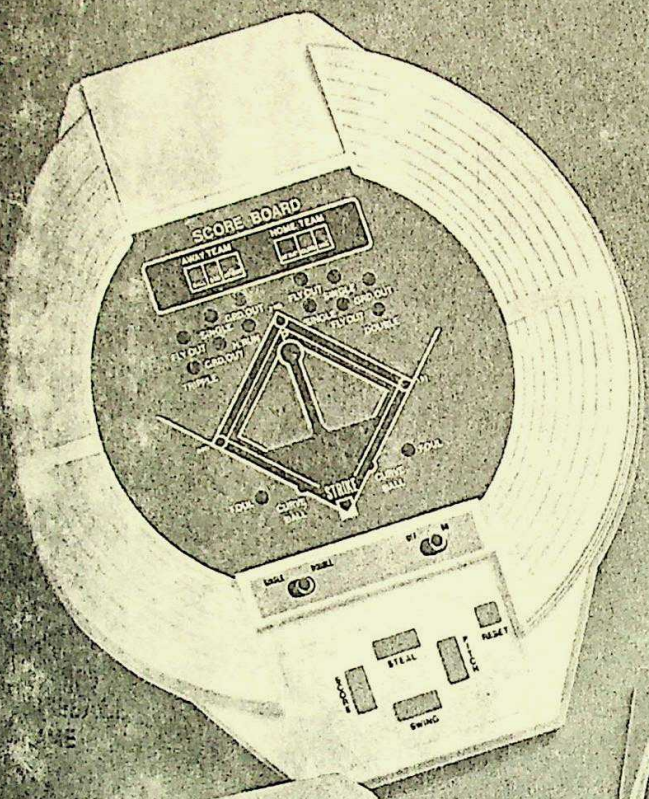
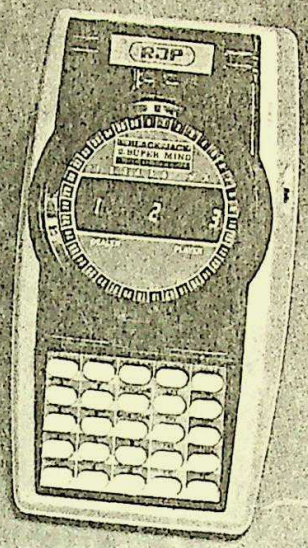
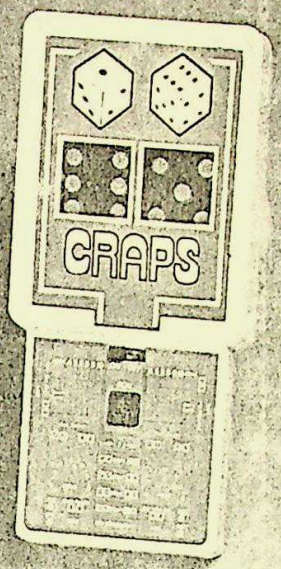
Handheld Games

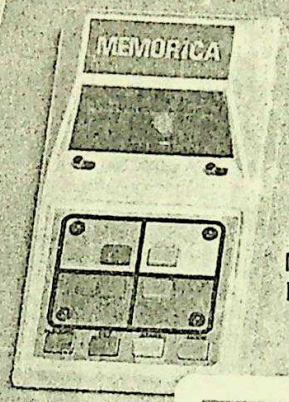




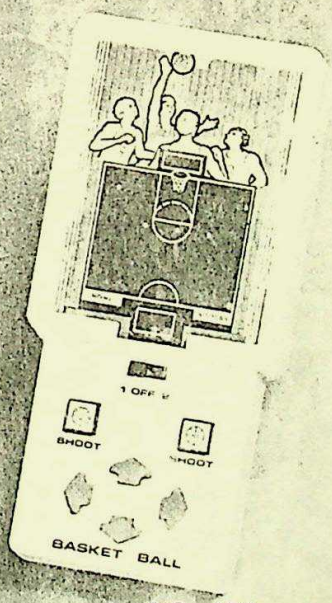
NO. 369 3-1 GAME



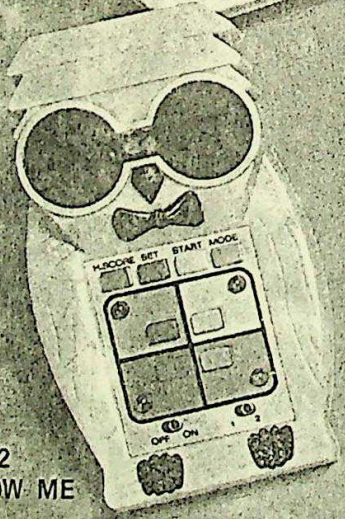
NO. 127
CRAPS GAME



NO. 123
FOLLOW ME



NO. 126
BASKETBALL
GAME



NO. 122
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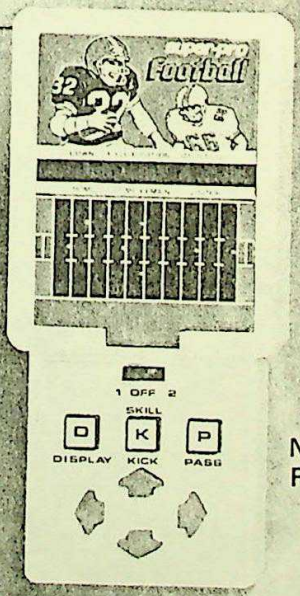


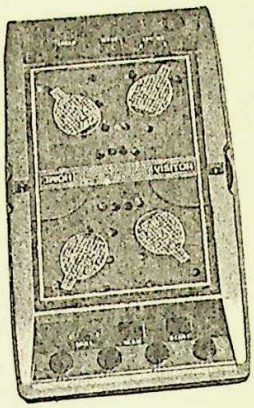
NO. 125
FOOTBALL GAME

P. 217

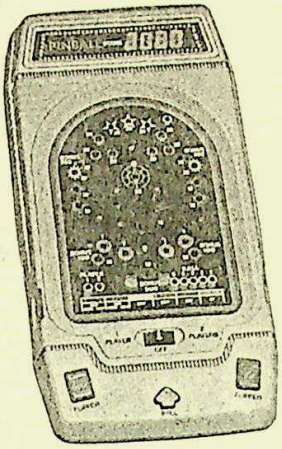
RJP

come browse through our toyland

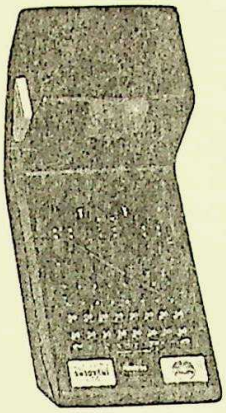
TABLE TENNIS GAMES



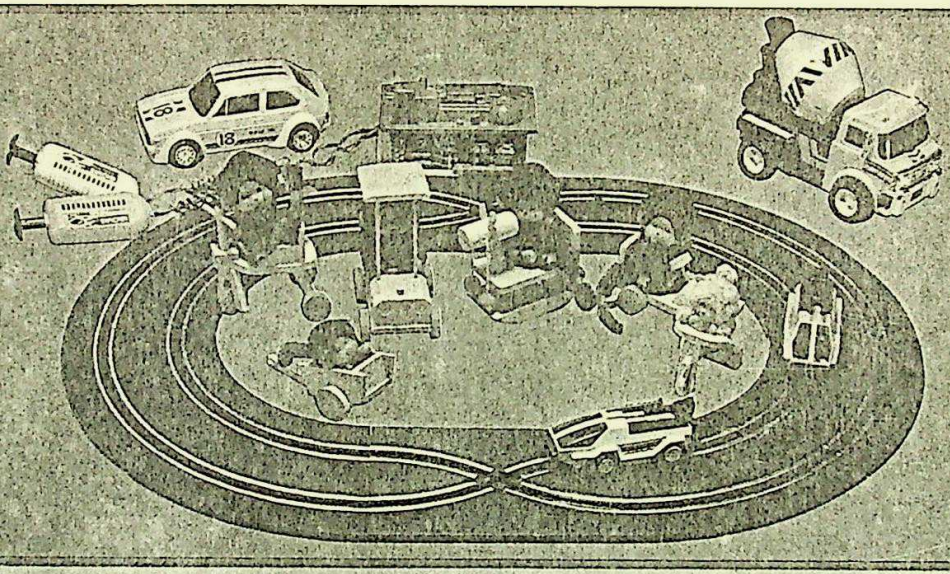
PIN BALL



SPACE INVADERS/BLOCK BUSTER



HONG KONG ENTERPRISE 1/81



B/O Dachshund that stops, wags tail, barks and walks.

P 231

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- Adjustable Viewing Angle
- Operated with 'AAA' Size Batteries

③LC–301 Traveller Alarm Clock

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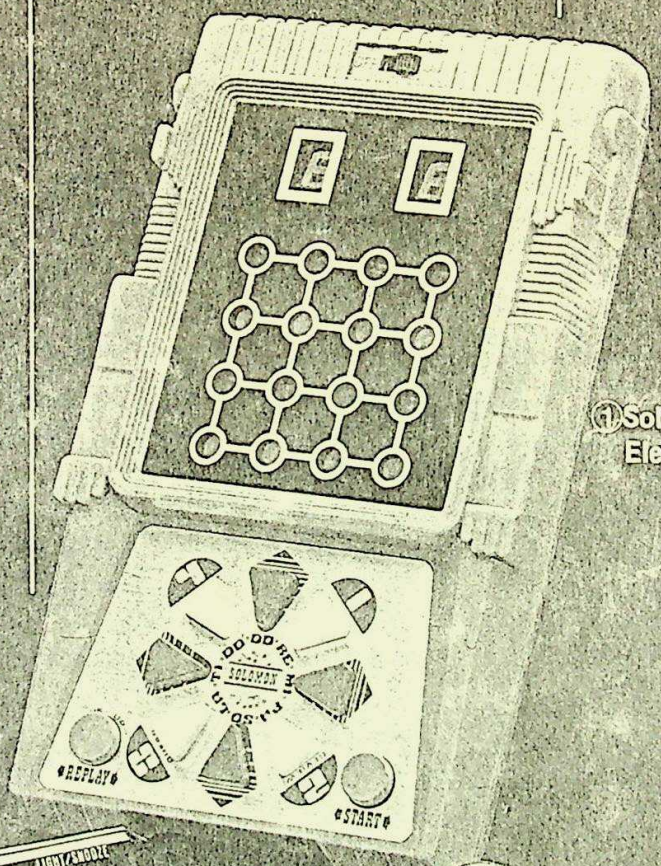
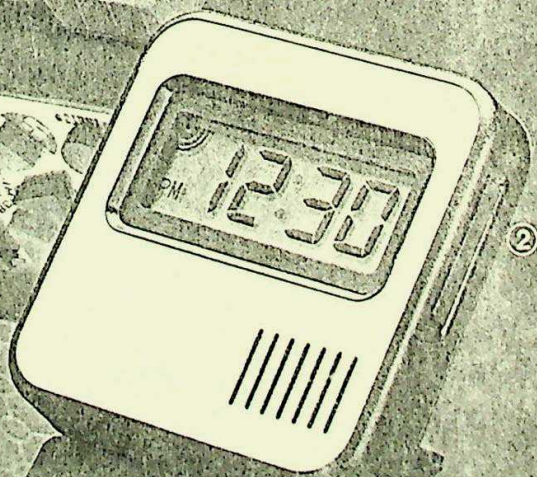
- Four minutes alarm with snooze function
- Powered by one Button-Cell 1.5V
- 103 x 50 x 8 mm
- Comes with Various Panel finish in G Black, Chrome or Lacquer



①Solomon–104 Electronic Game

③LC–301 Traveller Alarm Clock



②TC–1000 LCD Alarm

Tiger roars into action with computer games

MUNDELEIN, ILL. — Tiger Electronic Toys announced it will add several computer games to its line including talking-learning computers, and sports games offered for all ages.

Among the new electronic items are: Finger Bowl, 5-IN-1 Sports Stadium, Space Chase, Talking Picturebook, Talking Chalkboard, Sesame Street Cassette Player, Little Orphan Annie Phonograph, and Animal Lights.

Finger Bowl has eight action events on an oval, numbered track of a simulated, miniature sports arena.

5-IN-1 Sports Stadium features five sports games on one unit: football, baseball, basketball, hockey, and soccer.

A hand-held game in the shape of a rocketship, Space Chase involves a player maneuvering the space ship throughout the universe to avoid shooting asteroids.

Talking Picturebook is a talking companion and learning aid with 25 story pages designed to capture the attention of two to six-year-olds. It offers children fingertip access to 200 objects and corresponding words.

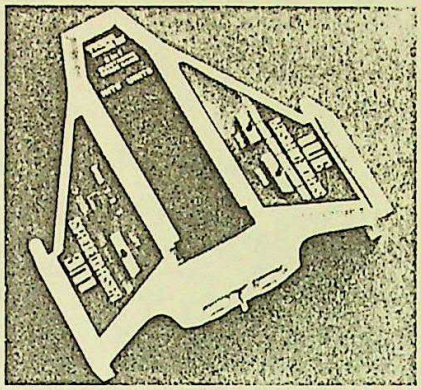
A picture-word match game with 10 inserts, Talking Chalkboard is a learning aid which helps children identify up to 40 different objects commonly found in his environment.

Sesame Street Cassette Player will play favorite bedtime stories and fairy tales on Tiger's child-proof cassette player.

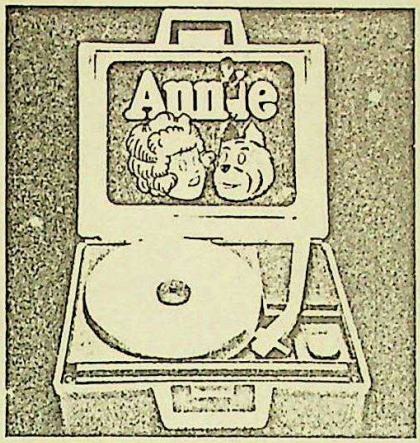
Youngsters can listen and dance to their favorite musical melodies on the Little Orphan Annie Phonograph. The two-speed turntable plays 33-1/3 records, with a pop-up adapter for 45's.

Animal Lights, a pocket companion and carry-along, will be available in four models. The brightly colored animals — a dog, hippo, alligator, and tiger — feature a tiny light shining out of each mouth, and a battery compartment in each tummy.

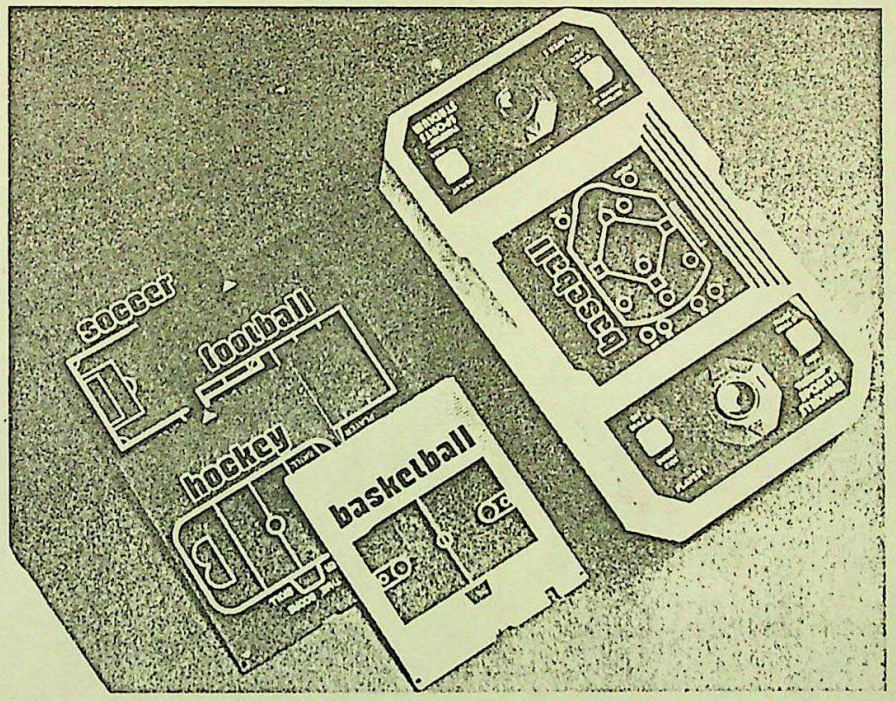
(Circle No. 762 on Reader Inquiry Card)



Space Chase



Little Orphan Annie



5-IN-1 Sports Stadium

Monogram unveils 37 model kits

MORTON GROVE, ILL. — Thirty-seven new items have been introduced by Monogram, including a 1/16 scale Kenworth 900 Conventional tractor as a companion piece to its 1/16 scale Peterbilt 359 released in 1980.

Also in trucks, Monogram has two new Snap Tite tractors and two Snap Tite tractor/trailer combinations. Additional Snap Tites will include an all-new category of four 1/24 scale cars featuring the Pontiac Trans Am, an exclusive license of Monogram.

Twenty-one glue-type car kits were welcomed including three in 1/20 scale and four in a lower-priced category of 1/32 scale, featuring the newly-designed 1982 Camaro Z-28. In planes, Monogram extends its line of 1/48 scale planes with five additions, featuring the Hawker Harrier.

A newly-tooled line of large sailing ships was also unveiled, featuring the USS Constitution.

Target 81

Playmobil's racing line has Schaper in the driver's seat

MINNEAPOLIS, MINN. — New themes and complementary vehicles enhance Schaper's 1981 Playmobil Toy System line.

The Playmobil Racers, to be introduced at this year's Toy Fair, feature accessories and vehicles with 3-inch, fully articulated figures. Racer sets will be available in three sizes.

Snow sports enthusiasts will enjoy the Winter Sports theme. Five miniature people come equipped with skis, sleds, skates, and ice hockey sticks.

A line of Stomper SSC Super Cycles, miniature stunt cycles that race along tracks, will also be unveiled.

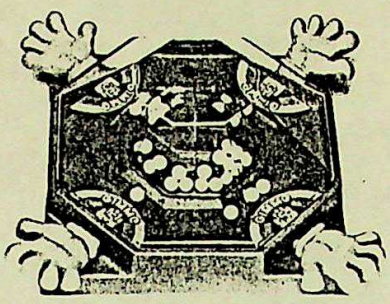
The cycles run on a fly-wheel mechanism that can be changed either by battery power pack launcher or manual pull starter.

Among the new games from Schaper are Gimme Five, Entrapment, Roadrunner Dodgem, Pick-Up Chips, Profit Protector, Don't Cook Your Goose, Sombrero, and Casper.

An expanded line of miniature four-wheel drive vehicles can be expected. The Stomper 4 × 4 line features improved sealed unit chassis design, interchangeable indoor/outdoor tires, and a better selection of models.

Five new models will be highlighted: Toyota Four-Wheel Drive SR5 Long Bed Sport Truck, Datsun Li'l Hustler, Jeep Renegade, Subaru Brat, and Chevy Luv. Each model is offered in two colors with detailing for collectors.

(Circle No. 660 on Reader Inquiry Card)



Gimme Five

Sombrero

Cox hits the runway with speedy planes

MINNEAPOLIS, MINN. — Cox/Leisure Dynamics introduces seven products in control line and radio control aircraft categories.

Wild Wings offers two new versions in 1981, the Delta F-15 and the Red Wing Racer. These planes are styled to appeal to the young first-time flyer.

The PT-19 Trainer, the most popular U-control plane built, has been restyled and repackaged.

Other planes in the line are the P51 Invasion Mustang, the Sopwith Camel, the Red Baron Air Racer, and the Piper Dakota.

Cox also offers The Shrike, a rear engine propeller-driven car both in free running and radio control versions. It twists, turns, and bounces, but keeps on going.

(Circle No. 661 on Reader Inquiry Card)

Coleco punches hard on Electronic Boxing

HARTFORD, CT. — Coleco is inviting boxing fans into the ring with Electronic Boxing, the newest addition to its Head to Head line of electronic sports games.

Like other Coleco Head to Head games, Electronic Boxing allows two players to compete with each other or a single player to compete against the computer.

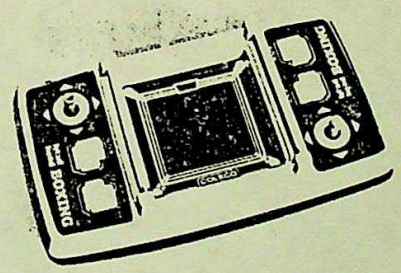
Up to four players can match wits with Quiz-Wiz Challenger, a competitive question-and-answer game. It begins with the Quiz Wiz electronic question-and-answer format and adds the excitement of direct competition.

The total control of real bowling is available with Bowlatronic, an electronic sports game. With Bowlatronic's advanced features, players can control the ball's direction, its curve, its speed, and the time of its release.

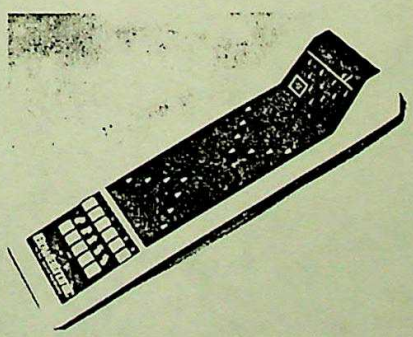
Magic Touch, an addition to Coleco's Play 'N Learn line of teaching toys, combines education with the magic of electronics to offer children over 200 matching activities.

It is man against mosquito in Swat Swat The Mosquito. Designed for one to four players, the game tests its players' reflexes as mosquitoes swoop, dive, and land at random on one of the playing stations. Four plastic swatters are provided.

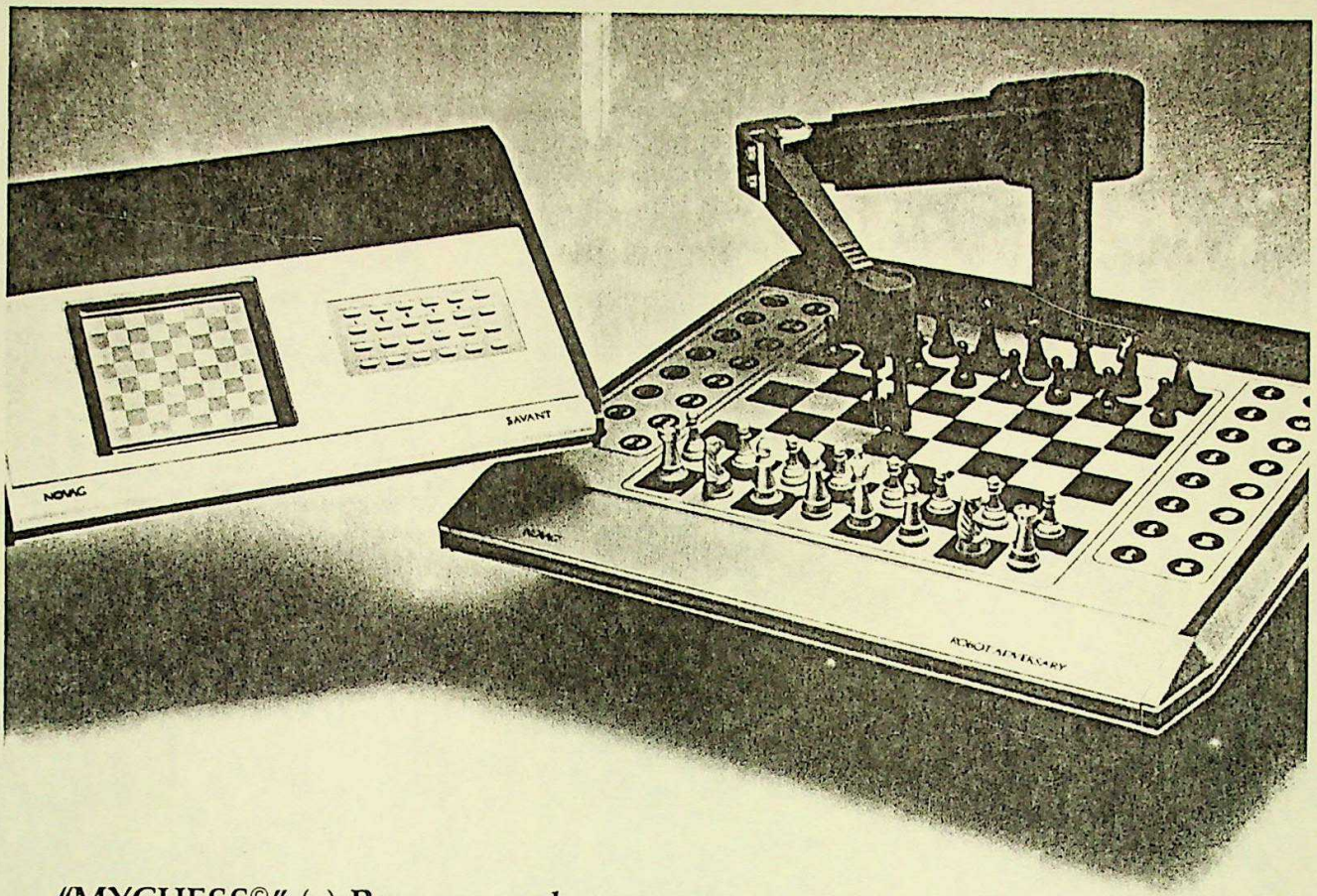
(Circle No. 667 on Reader Inquiry Card)



Electronic Boxing



Bowlatronic



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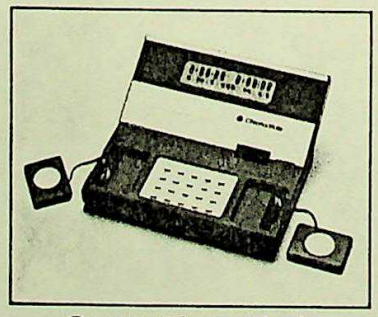
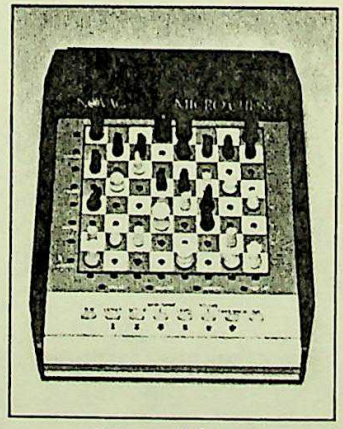
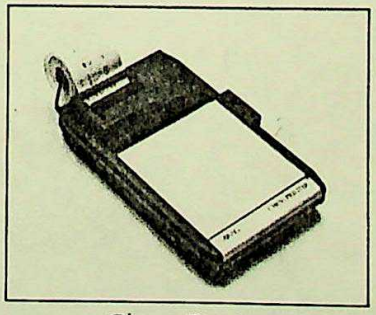

Quartz Chess Clock


Micro Chess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#6020 ELECTRONIC ESCAPE™ 1000 MAZES

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PLAYTHINGS FEB. 1981

#6008 ELECTRONIC JACKPOT GIN RUMMY

#6015 ELECTRONIC BLAST IT

HIP POCKET ALIEN INVADER™

#6012 ELECTRONIC SPACE INVADER™

#6100 HIP POCKET BASEBALL

#6013 ELECTRONIC TENNIS

#6010 ELECTRONIC BASKETBALL 2

#6014 ELECTRONIC MUSICAL MARVIN

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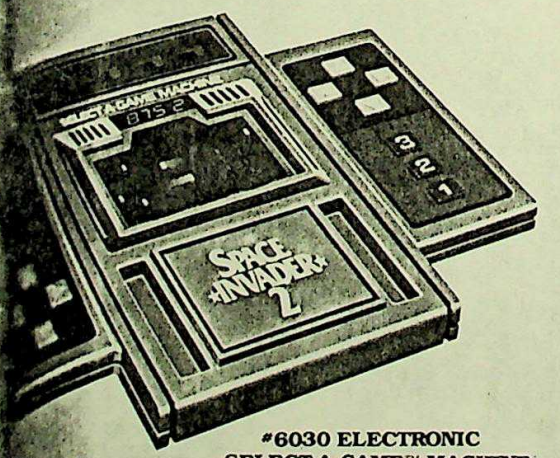

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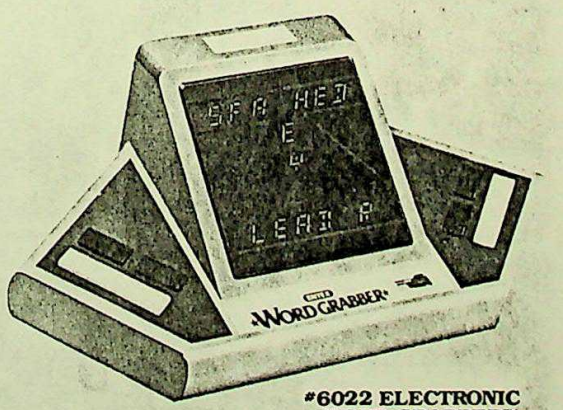

#6022 ELECTRONIC WORD GRABBER™

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PLAYTHINGS FEB. 1981

Tryom sparkles with computerized backgammon and chess sets

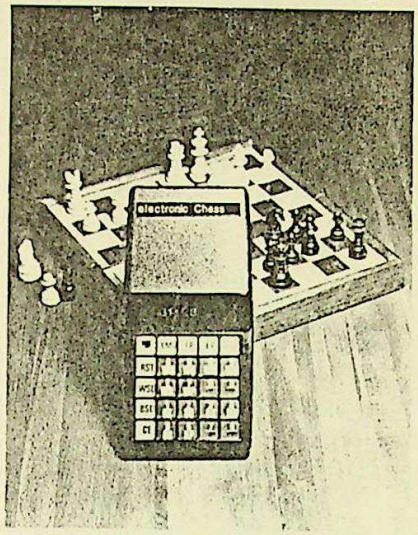
CLEVELAND, OHIO — Tryom, manufacturers of micro-processor items, will feature several advanced electronic games that include bridge, backgammon, and chess.

Both the Omar I and Omar V computerized backgammon games pit one's intellect against the electronic wizardry of Omar. A portable 9 inch magnetic board makes the Omar I easy to transport. The Omar V employs a running game, back-game, semi-back game, and bear-off strategies.

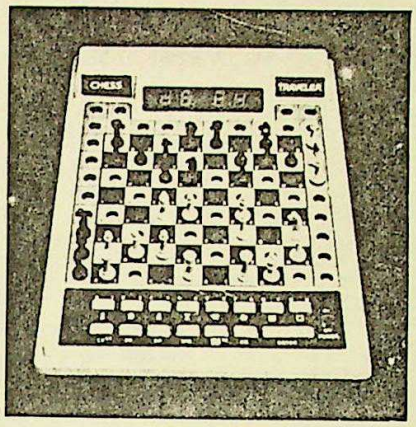
The Gammonmaster II, the most sophisticated computer game in the line, makes it impossible to cheat or make an error since the computer verifies all moves.

Goren Bridgemaster employs Goren's American style of bridge play, and will assume any number of hands at two levels of skill. Playing conventions include Gerber, Blackwood, Stayman, Two Strong, Take Out Double, Penalty Double, Preempt Bid, and Reverse Bid.

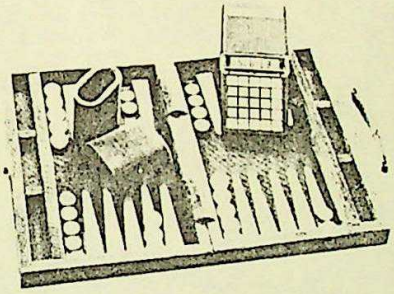
An 8-level chess computer is a hand-held battery operated game that comes with an 8 inch magnetic wooden chess set, playing pieces, and operates on AC or DC. Special features include a problem-solving mode, position verification, audio feedback, En Passant capture, and pawn promotion.



Electronic Chess


GMT-1000

The Chess Traveler GMT 1000 is a lightweight, portable set that has 7 levels of play, beginner to expert. Random computer responses vary the strategy and play from game to game.
(Circle No. 752 on Reader Inquiry Card)


Omar II

Effanbee recreates Wayne-American

NEW YORK — Effanbee Doll will unveil John Wayne–American, the second in the firm's Legend Series.

This 17-inch collector's doll depicts "The Duke" in red "longjohns" and a corduroy shirt.

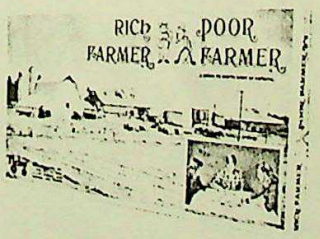
Other introductions for 1981 include Send In The Clowns, a group of five Pierrots; Hattie Holiday Collection, a freckled toddler with four holiday outfits, and new Faith Wick originals, such as Wicket Witch, Hearth Witch, and Peddler woman.
(Circle No. 688 on Reader Inquiry Card)

Grain embargo enlivens McJay farmer game

DECATUR, AL. — McJay's Rich Farmer, Poor Farmer game now contains the elements of grain embargo and gasohol. The first farm game on the market, Rich Farmer, Poor Farmer allows players to experience the responsibilities of farm ownership and development. The players begin with $25,000 and the object is to survive financially. It is designed for two to six players. There are six games packed to a carton measuring 20×8×10″.

McJay's arm puppet and doll division introduced puppets and dolls featuring the registered "loving arms around you" design. Each is 48 inches long and made of non-allergenic, non-toxic materials with safety-locked nose and eyes. The Wookie, Jasper and Grannie puppets come in rust, black, or champagne plush fur. Jasper and Grannie feature curled tails with a leather-like face and ears. The complete line is machine washable and packed 12 or 24 to a carton.

McJay's Command Ship Invasion, a new board game of Rodger's Game, has been designed for two players, 10 years and up. The object is to invade the opponent's territory and destroy the command base or command ships in one of five winning combinations.
(Circle No. 779 on Reader Inquiry Card)



McJay's farmer game

PLAYTHINGS
APRIL, 1981

INSIDE FRONT COVER

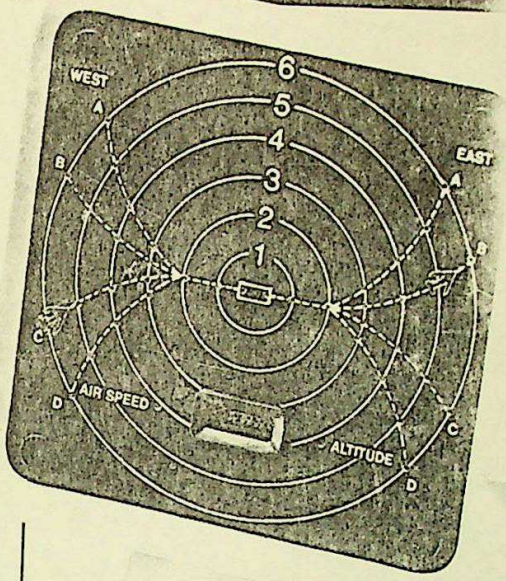
BORING, THEY'RE NOT.

Boring is the one thing a good electronic game should never be. And it never is, when it's a Bandai Electronic Arcade game.

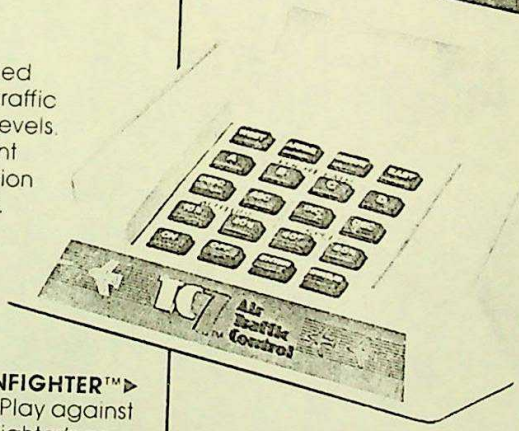
Bandai was one of the pioneers in electronic games, and continually produces the most innovative games in the marketplace.

Exciting, involving, innovative, appealingly priced, Bandai Electronic Arcade games are the State of the Art, from one of the largest and most dependable toy companies in the world.

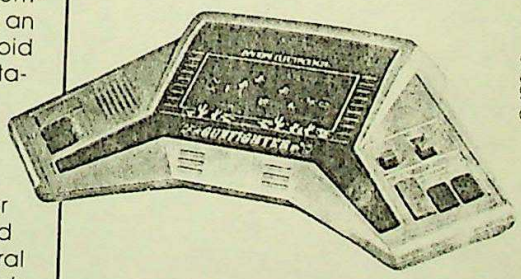
Bandai Electronic Arcade. Boring, they're not.

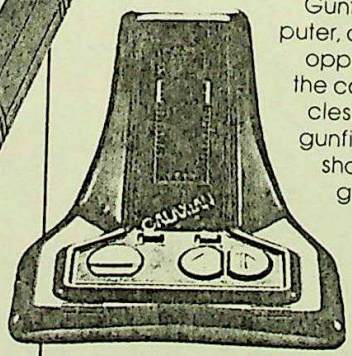


TC-7 AIR TRAFFIC CONTROLLER™▶
All the realistic, fast-paced excitement of a real air traffic control center. Four skill levels. Game scores higher point totals for fastest completion of takeoffs and landings.



GUNFIGHTER™▶
Play against Gunfighter's computer, or against an opponent. Avoid the cactus obstacles. When a gunfighter is shot down, gunfighter falls over and funeral march plays!





MIRACLE BASEBALL™▲
The most advanced baseball game on the market, with base stealing, sacrifice flies, double plays, bunting, six pitch variations, remote player controls. Defensive players move to actually catch the ball. 4" × 3" liquid crystal screen is the industry's largest.

GALAXIAN™▲
One of the hottest selling electronic games in the entire country. Five color fluorescent read-out. Invaders fire head-on and at varying angles. Visual explosions and arcade sounds. Two skill levels to challenge even the most expert players.

BANDAI ELECTRONICS ARCADE®

BANDAI AMERICA

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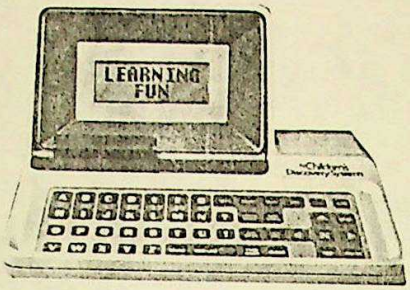
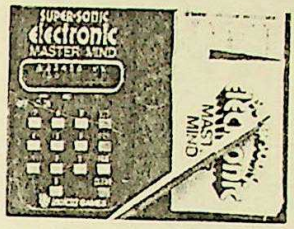
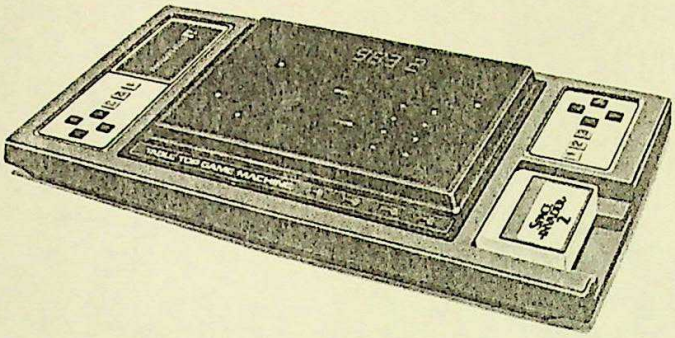
(Circle No. 36 on Reader Inquiry Card)

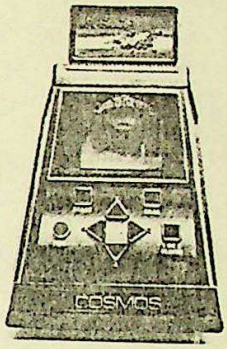
PLAYTHINGS
April, 1981
P. 41







Clockwise from left: the Tabletop Game Machine by Entex; Mattel's Children's Discovery System; Speak & Read from Texas Instruments; Electronic MasterMind by Invicta, and Atari's Cosmos game.



always be there for games that offer more play features to control, and the opportunity for more people to play at a popular price point. Katz does admit, however, that the company is putting more emphasis on its Telstar Video game line this year than ever before.

Most retailers consider this the right direction to take. Almost all who stocked the Atari video game line and Mattel's Intellivision reported success, sometimes with surprise.

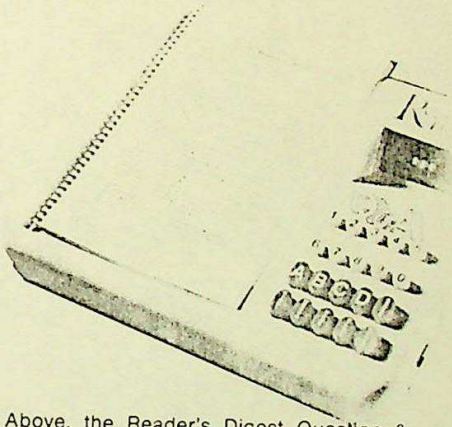
Cassler, whose store began stocking video games three years ago mainly as a side line to entertain the employees on slow nights, managed to sell over 40 Intellivision sets this past holiday season. Luckily, he says, no one else around Burlington stocks Intellivision.

The manufacturers stress that with the rising cost of entertainment, consumers are willing to spend more money on a home video or computer unit that can be updated each year with new programs. With today's technology, they stress, the only limits are the imaginations of the programmers. Psychologists say this new form of home entertainment will result in greater emphasis on getting together with family and friends for group activities.

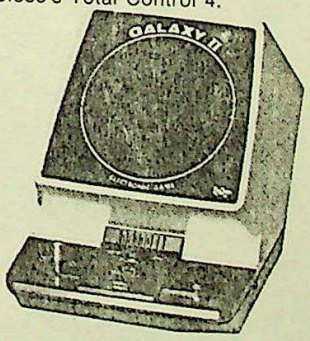
Television advertising, according to both manufacturers and retailers, seems almost as important to the electronic game market as the software itself.

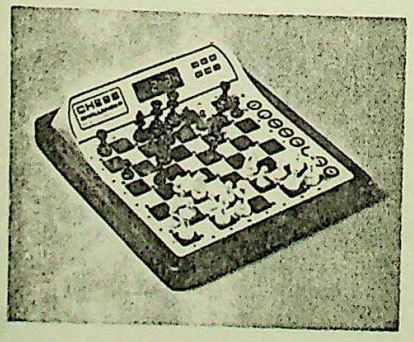
"We just won't buy anything that is not TV advertised," explains Gleichenhaus. "Since we do not have much on-the-job help to offer the customer, he must be pre-sold before walking into the store."

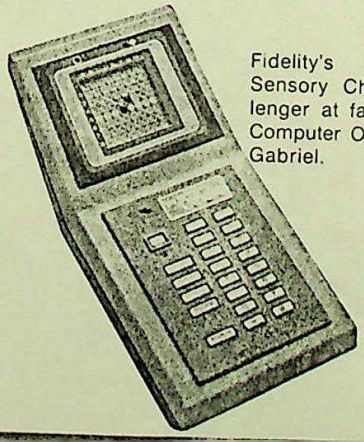
John Baiocchi, national sales manager for Imaginamics, a company less than a year old, says he learned quickly that in electronics, promotion is more than half the battle, and that without television, you don't have a chance. He is planning to spend $1 million to promote his



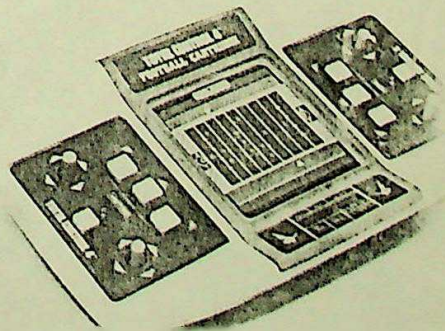
Above, the Reader's Digest Question & Answer game by Selchow & Righter. Below, Epoch's Galaxy II. At bottom, Coleco's Total Control 4.







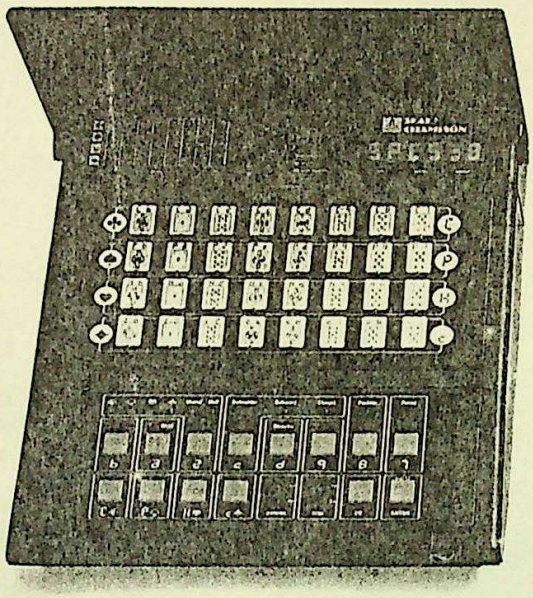
Fidelity's Champion Sensory Chess Challenger at far left, and Computer Othello from Gabriel.



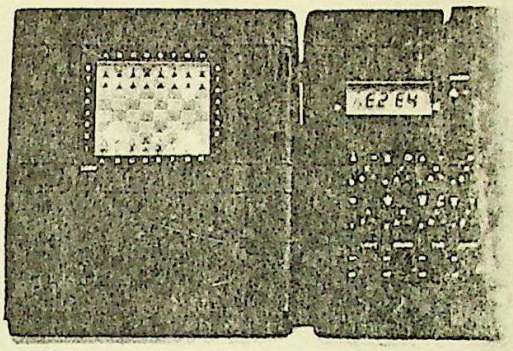
HONG KONG ENTERPRISE REC'D 5/15/81

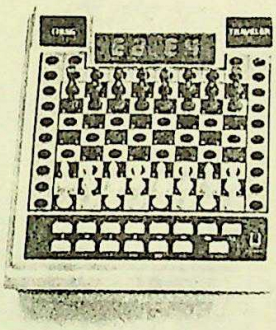
PLAY THE W

SKAT CHAMPION
SKAT — the national card game of Germany. Can play either one or two hands. The SKAT Champion PARTNER Unit (not shown) allows two people to play against the computer.

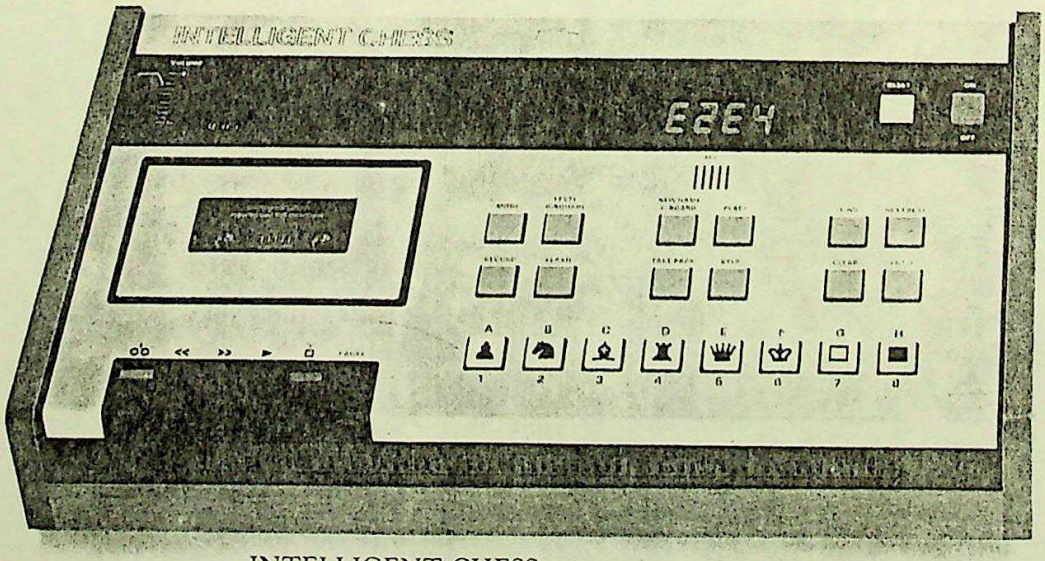


CHESS CHAMPION
SUPER SYSTEM IV
Unique among chess computers. Love or hate the game, this is the most advanced computer system for chess fanatics. "State-of-the-Art" LCD chess board and electronic printer. Plug- in program modules available now to play other exciting board games.





CHESS TRAVELER
Exercise your brain-power anytime, any place. Battery operated.



CHESS PARTNER 20
Uses latest "Sensor" tech
Eight levels of play — ev
against itself.

INTELLIGENT CHESS
An ideal teaching aid using your own TV. Inbuilt cassette either for recording your own game or playing back games by Fischer, Karpov and other Grand Masters.

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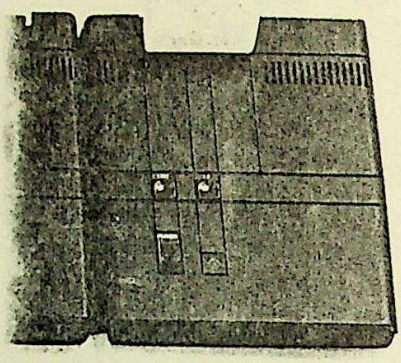
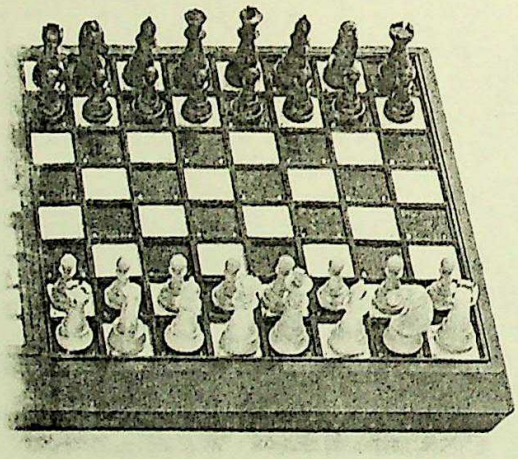
NNING GAME





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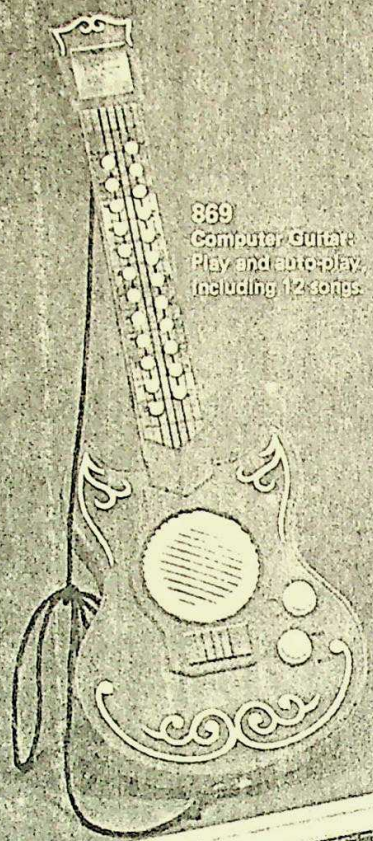
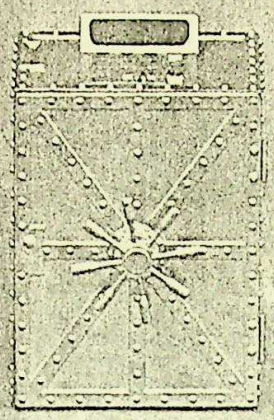
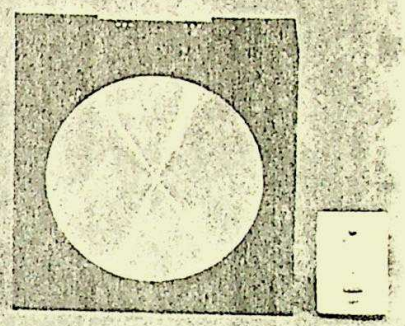


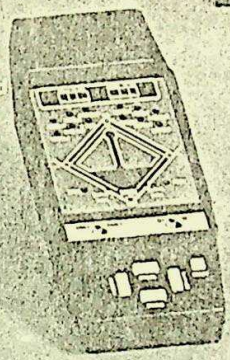
869
Computer Guitar:
Play and autoplay
including 12 songs.



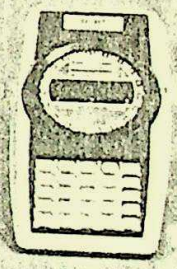
819
Safe: Guess secret
number to open.



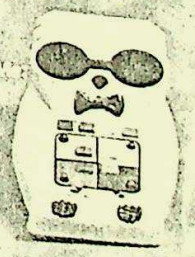
818
Door Chime:
12 songs door bell.

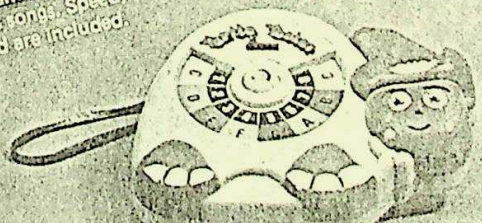


866A
Base Ball Handheld
Game: 2 players,
similar action of a
real baseball game.



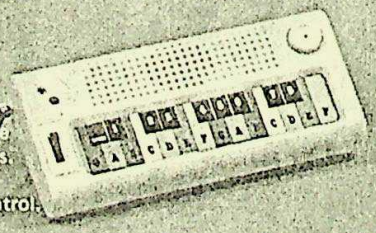
1510 Learning Computer Organ: With light
and learning mode for 8 songs. Speed,
volume, play and record are included.

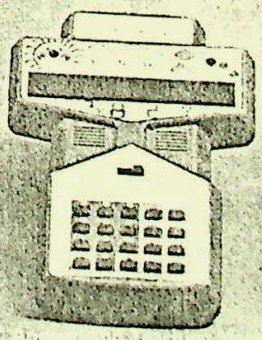


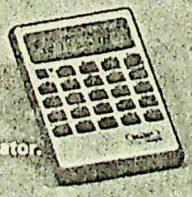


S115 Turtle: 8 songs, four functions
with volume control.

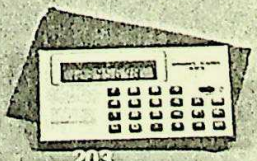
868
Mini Computer
Organ: Small size
including 8 songs.
Four functions
with volume control.







2600
LCD Calculator.



203
Mini Card
Calculator.

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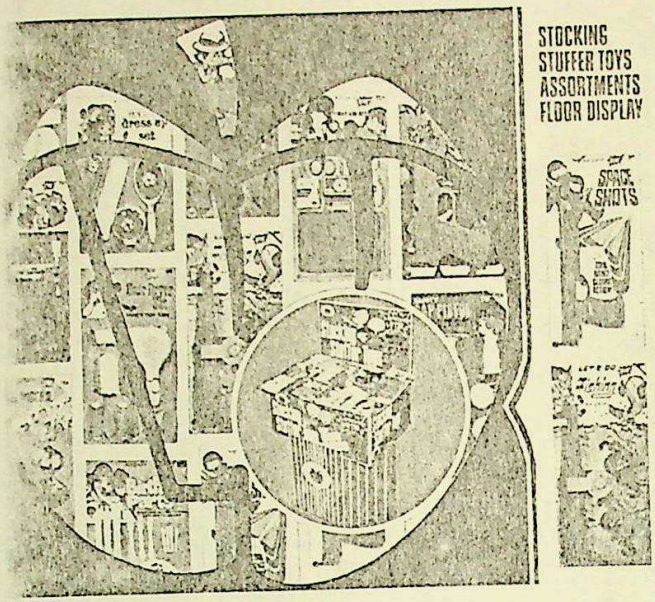

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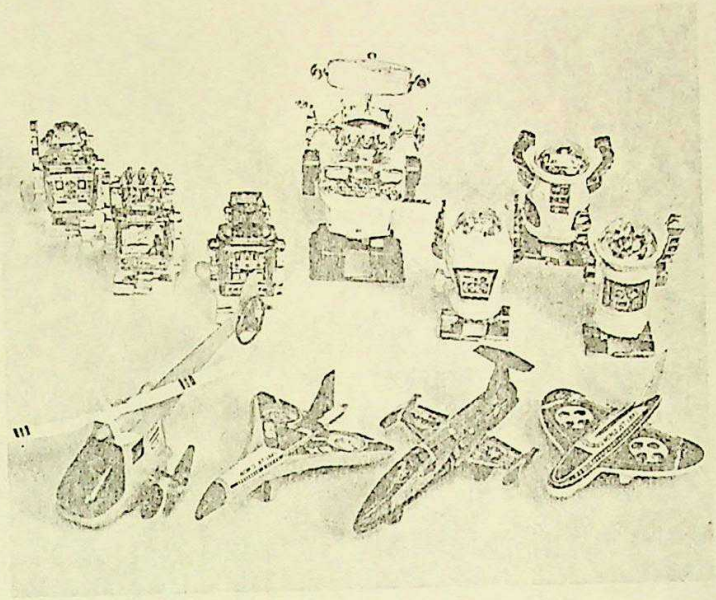

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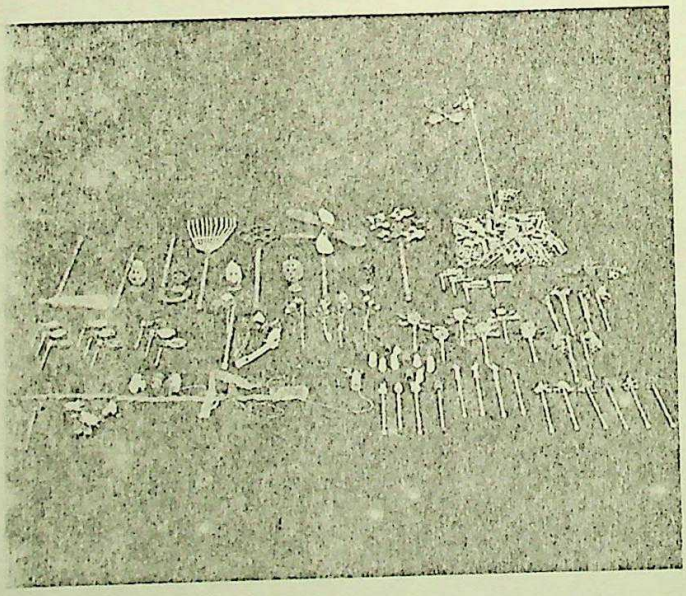

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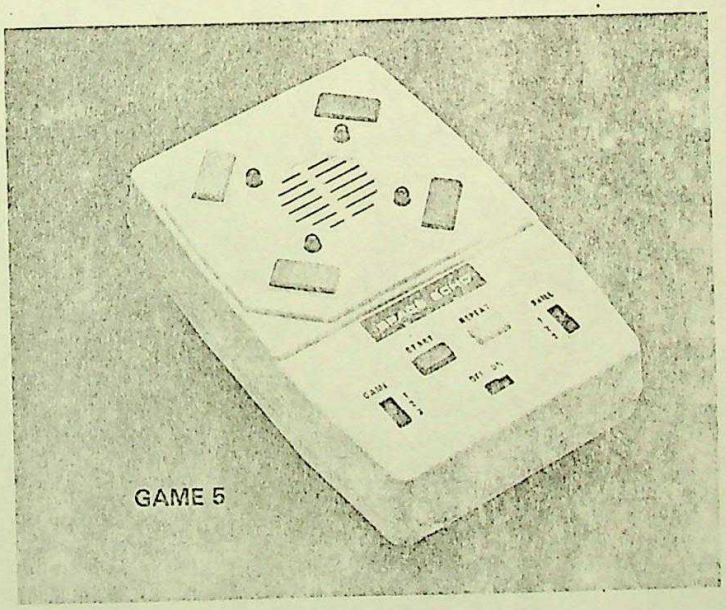

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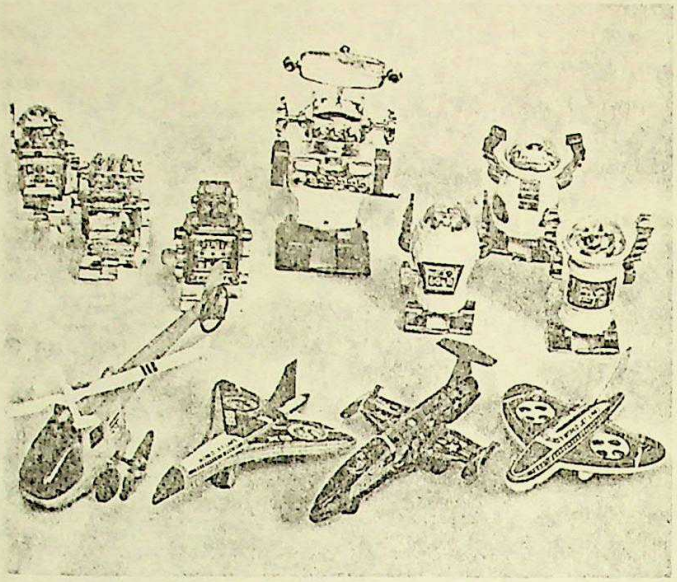

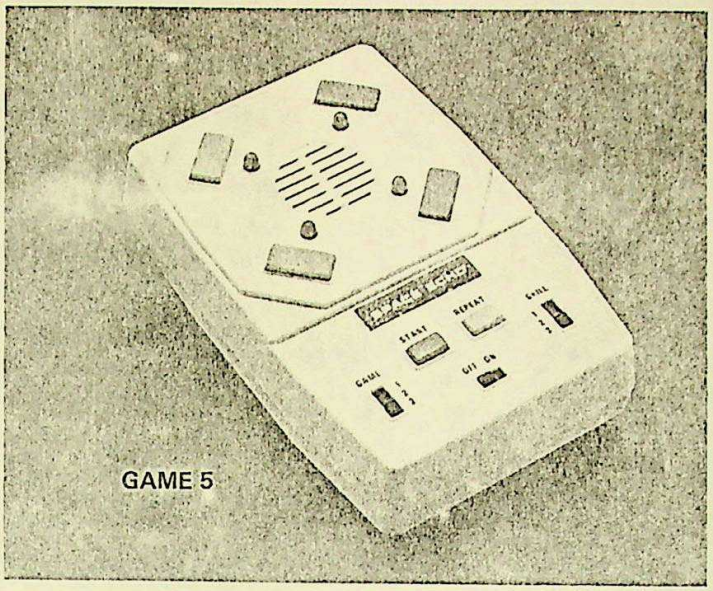

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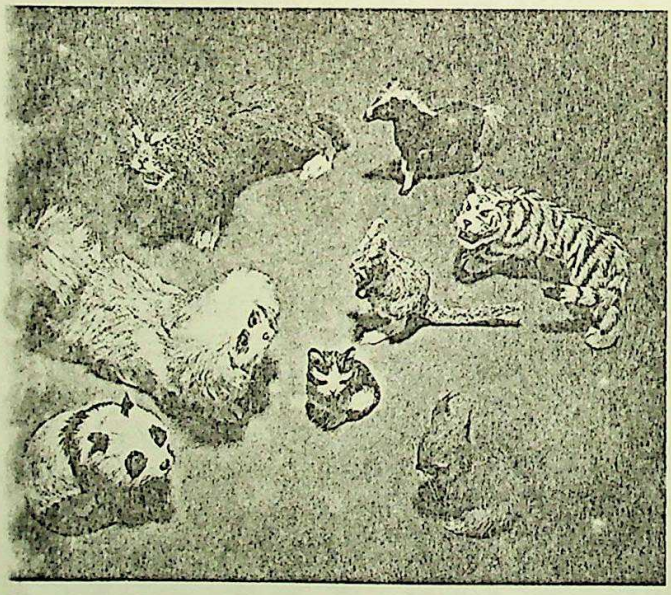

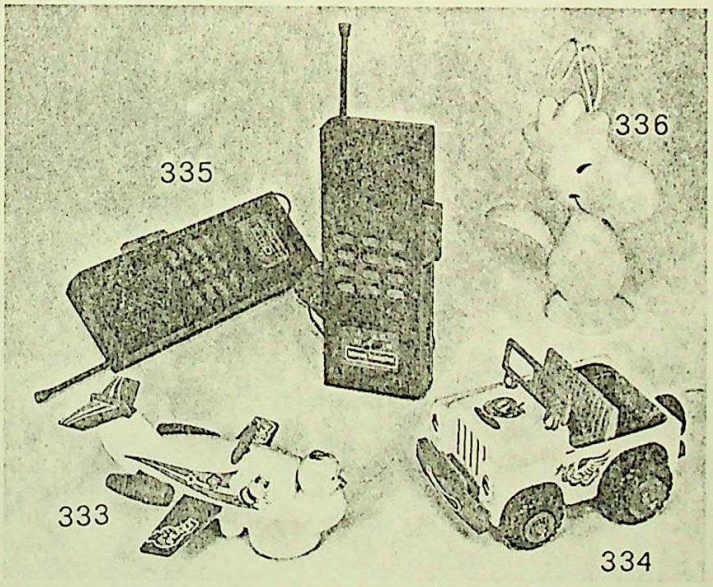

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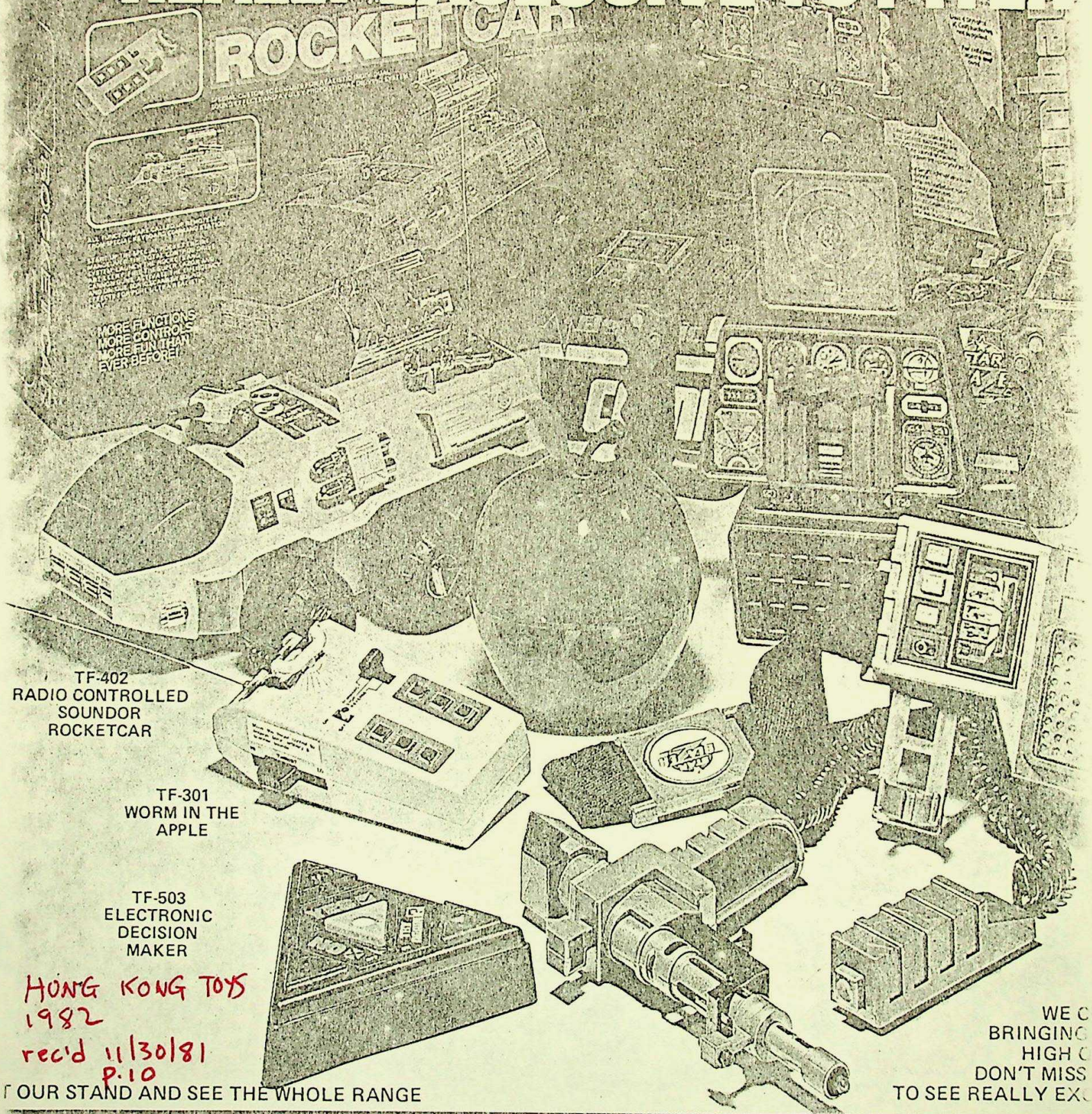

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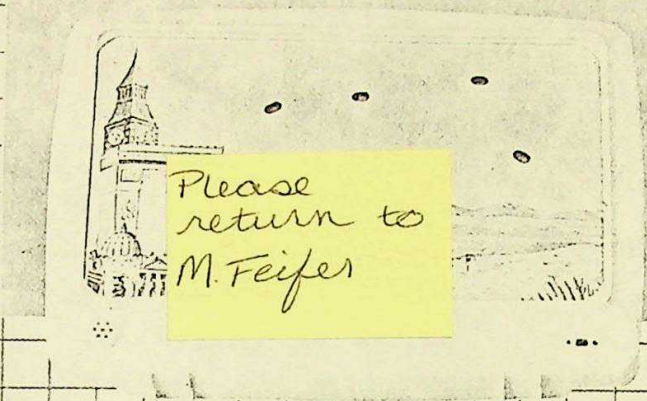
2. Dual Competitive Shooting Game
3. Lights & Sounds Chasing Shooting Game



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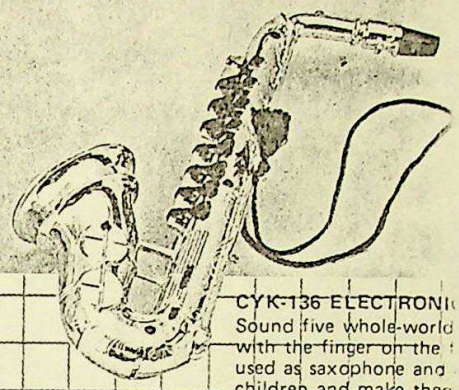
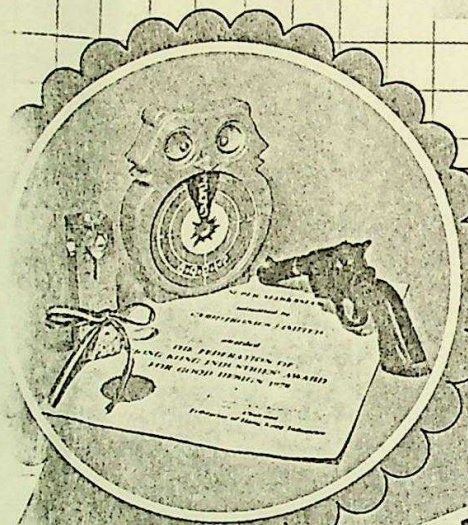
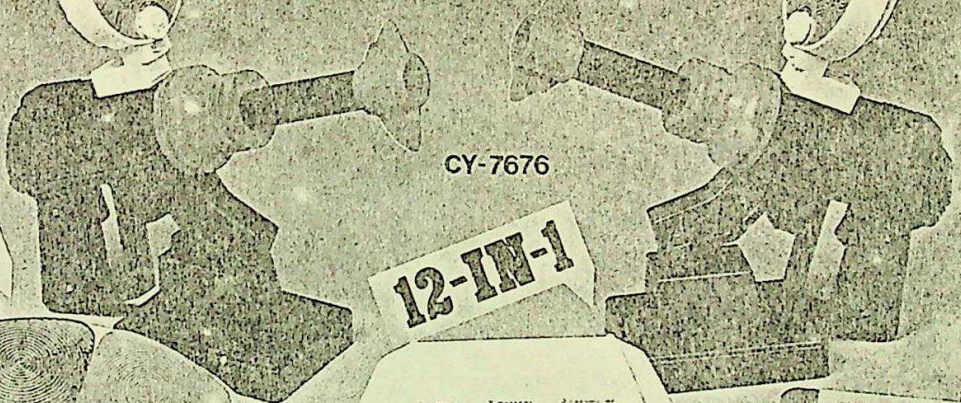


CYK-136 ELECTRONI
Sound five whole-world
with the finger on the
used as saxophone and
children and make them

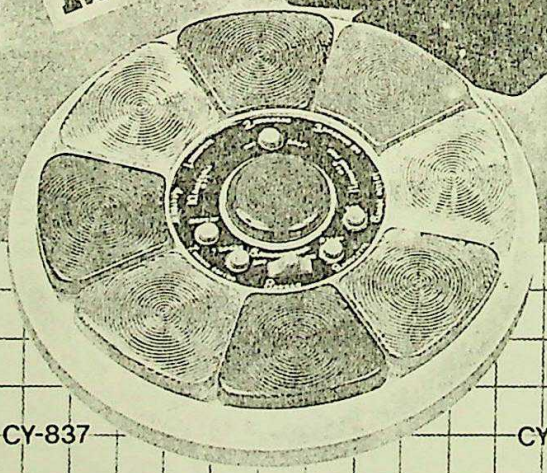


CHALLENGE your opponent(s)
Winner is the one who first extinguishes his opponent's gun by fifteen accurate shots at the target.



CY-7676

12-IN-1



CY-837

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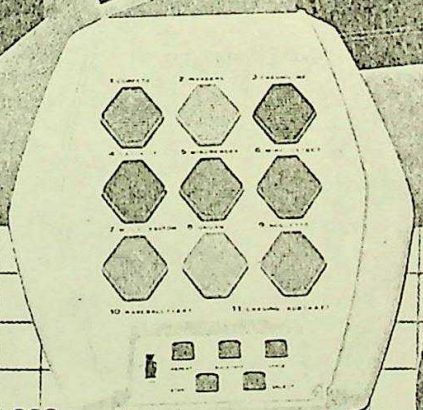
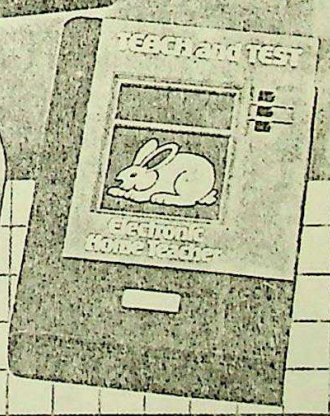


CY-838



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Multi-Colour Fluorescent Display

Shooting Game with Sound Effects

P.186
HONG KONG
ENTERPRISE
11/81

Control Space Shuttle to send space architects and tools in turn for the construction of Space Station, warding off the attacks of enemies' planes controlled by the computer. Higher level skills become required step by step as the construction of station advances through the heavy attacks of enemies' planes.

Power Supply: Batteries
Dimension: L 272 mm
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- FIP Multi Colour Display (NEC)
- Sound Effects

How to score:

1. By the time used in sending up all architects and tools
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PLAYTHINGS 2/82

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MARCH 1982
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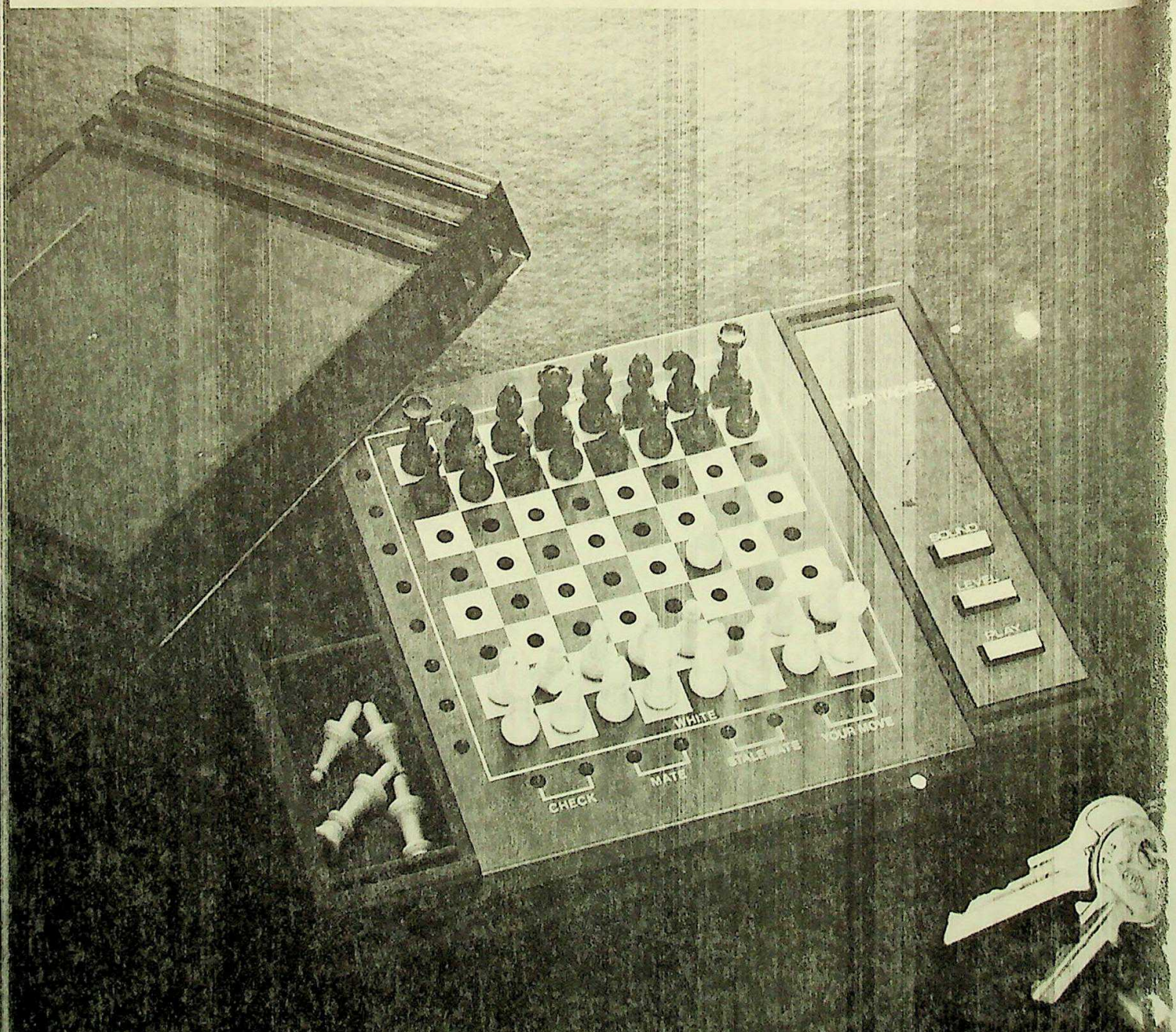

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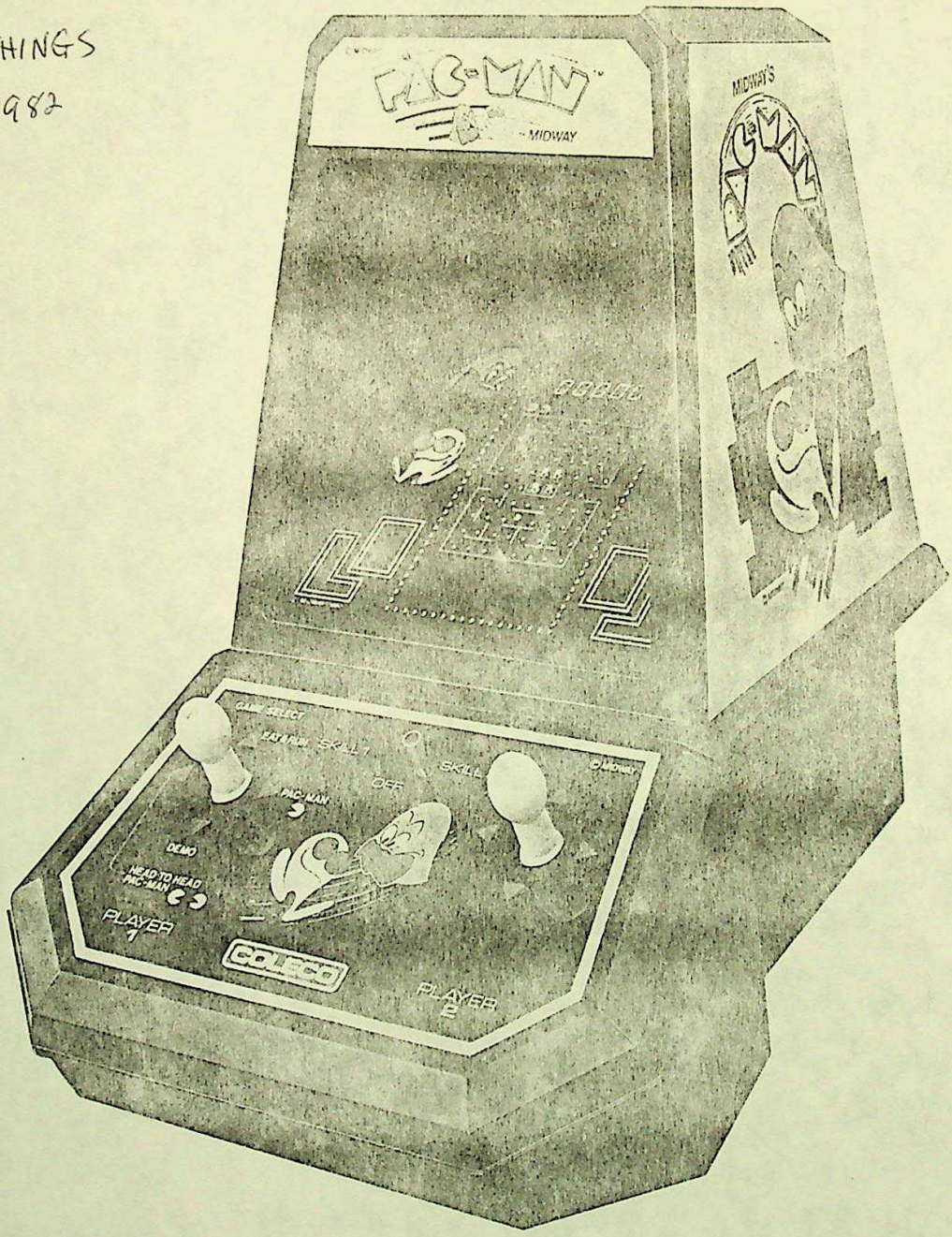
PLAYTHINGS
April, 1982
p. 17



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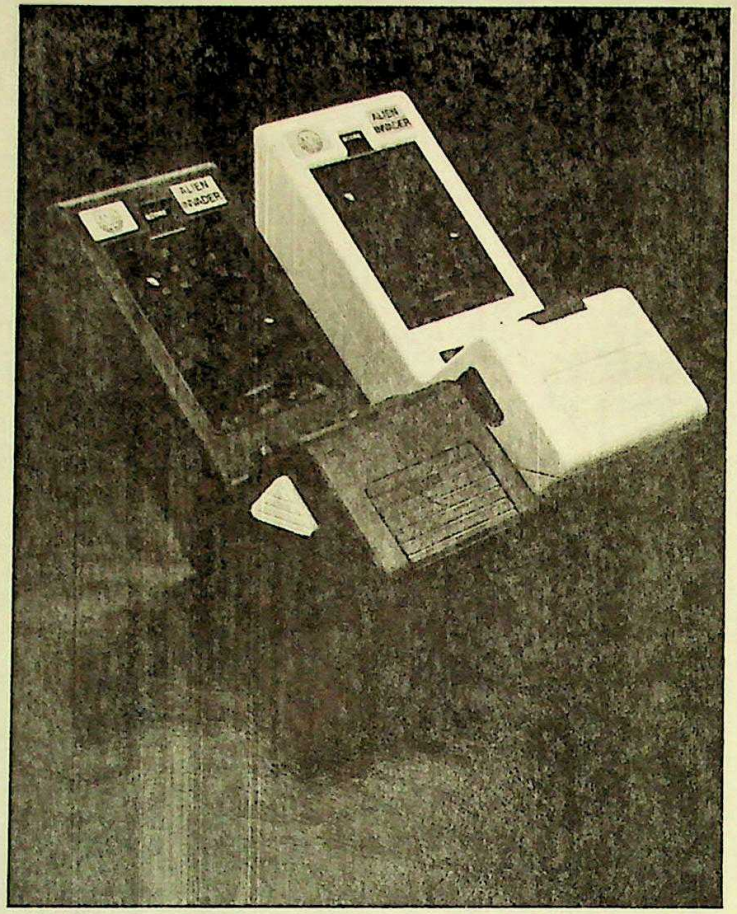
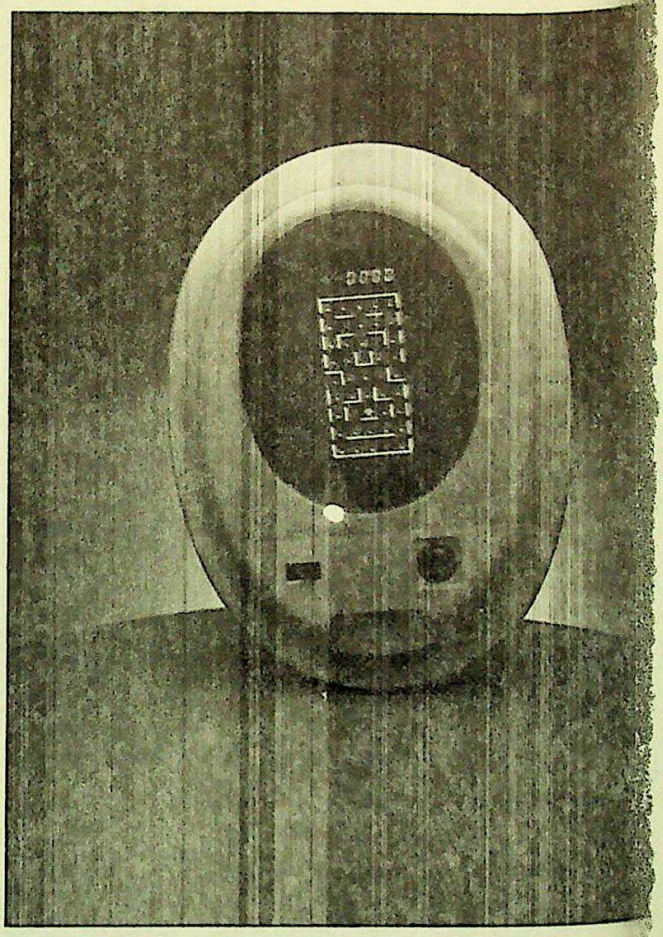


Alien Invaders ET-802

●● 2 color LED display

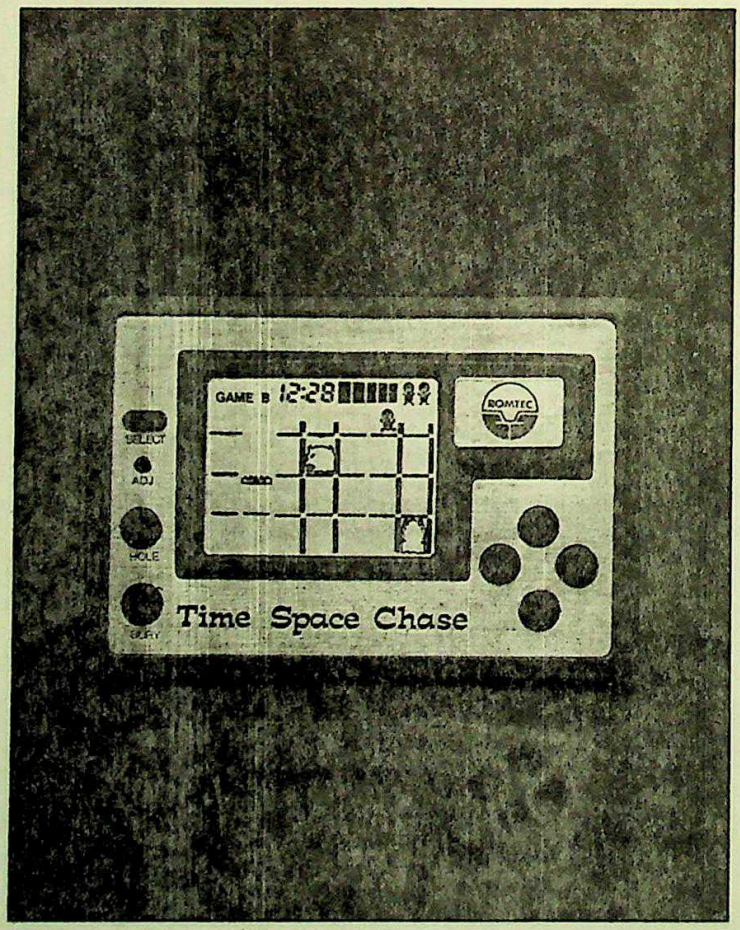
Multishaped invaders are attacking, fire back to protect your planet.



Pucki & Monsters ET-803

●●● 3 color fluorescent tube display

Run, get Pucki energised to eat up the monsters.



Time Space Chase ET-804

Liquid crystal display
Capture as many monsters as you can before your oxygen runs out.

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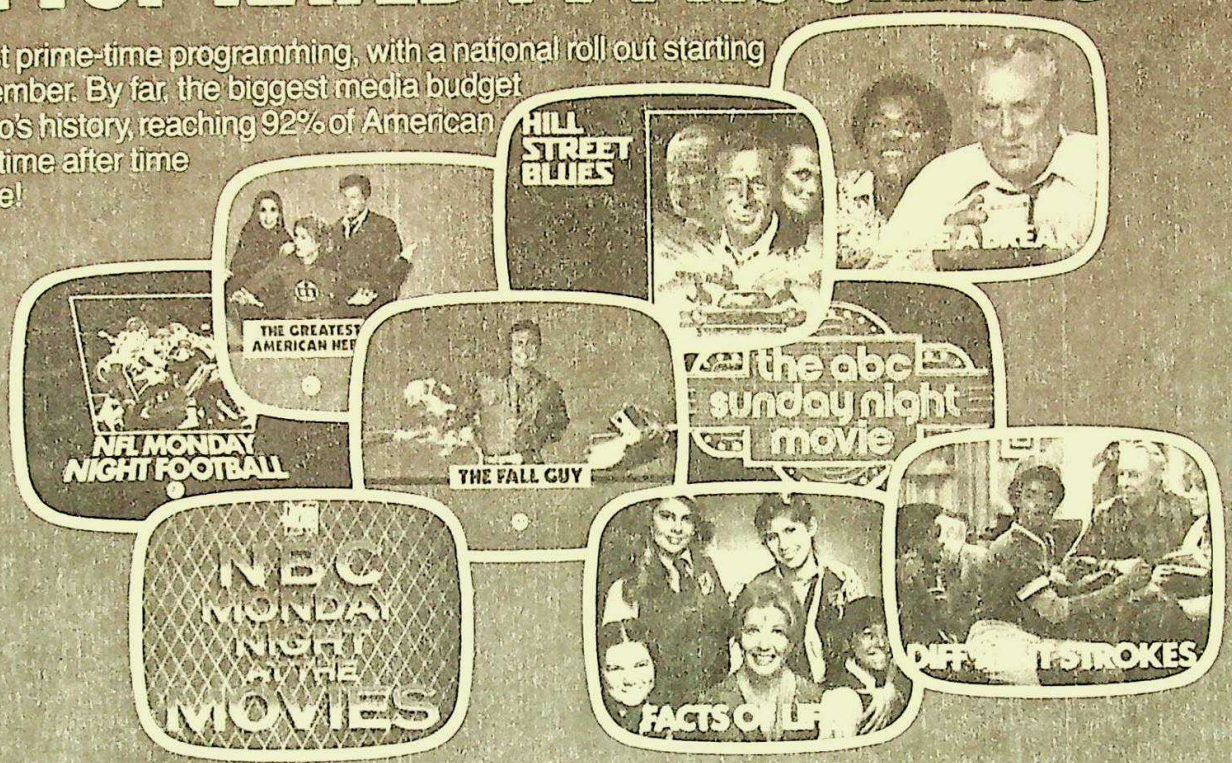

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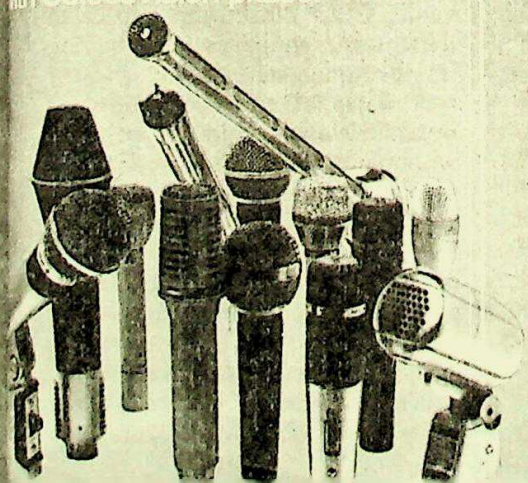

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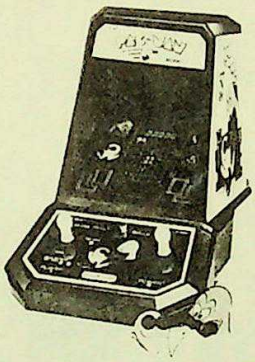

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PLAY METER MAGAZINE

by two short roll-over wires down and out. When lit, the wires have their own special value (more in a second on that). And that's the basic layout.

ANALYSIS: Talk about your game-within-a game-concept, this machine goes one step further and even adds in a left-side counter—just to the right of the left flipper button on the metal overlay where the readout is for rounds and rounds won. After all, if you're going to use America's success story, you've got to go for the knockout and *Rocky* attempts it with a totally integrated effort that should leave any pinball player slightly punch drunk.

The way the game has been designed and the strategy involved for maximizing the scoring chances calls for players to hit down the numbered drop targets around the board in sequence in order to win a round before the time is up and the round is lost. Winning rounds can bring bonus multiplier of 2X, 5X, or 10X depending upon the incremental buildup. Although even losing a round doesn't mean that much of a negative to a player if he can survive up to 10 rounds, and light that center blue target in the upper bank for an extra ball.

But it's all a question of getting into the flow of game that has the player going for the top, then the lower right side, over to the lower left side, and then back up to the top, and so on. If you want to take it one step further, it's almost like fighting someone—going for the head and then following with a right and left to the body, with five flippers supplying the punching power.

The right-side flipper button controls the lane lights on top right and below as well as the lighting of the thumpers and an increase in their value, while the left side features an additional flipper button for activating an instant winning round when the center kick-back kicker is lit and the ball enters into it.

What may be more of a concern to players in trying to set up an approach to get into the game, is that the scoring tends to be low. In fact it's a bitch to really get to the point where big numbers can be achieved. The shooting angles by the configuration of design tend to make the movements up and down rather than comfortably side to side, where some spacing is almost too severe to make it a standard part of the repertoire—like going from the left side bottom over to the right side bottom, or vice versa, although this is somewhat easier.

Neither are helped, however, by the size of that center kick-back kicker that cuts off a measure of space from the lateral play.

GRAPHICS: Hats off to the essence of what has become an American symbol of achievement (although Gerry Cooney might not feel like the embodiment of the Philadelphia story). True to form is old

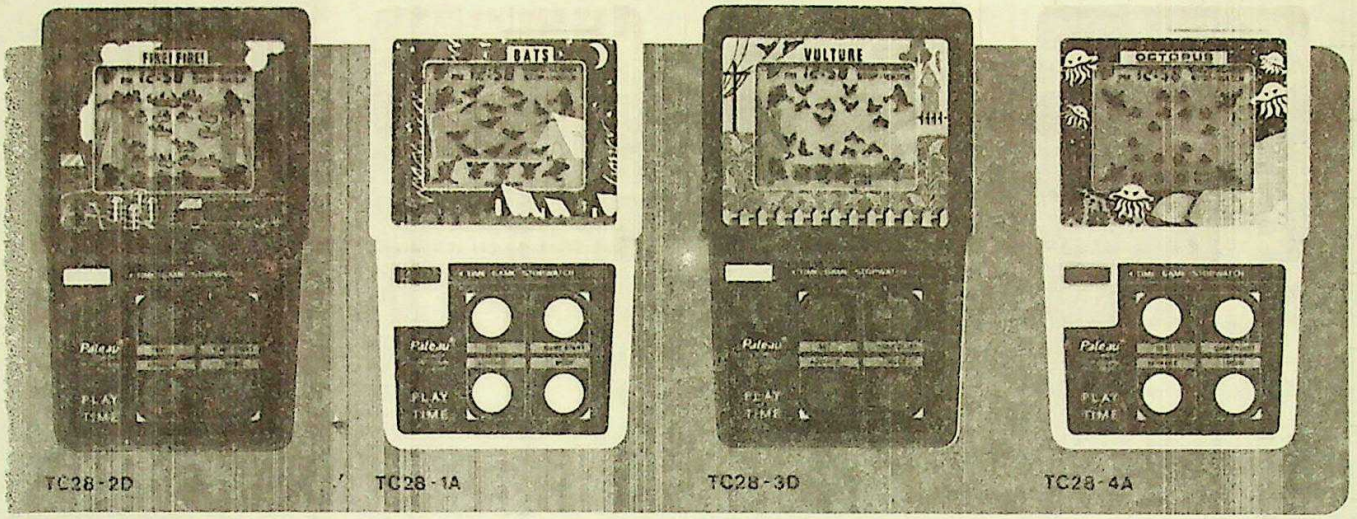
HONG KONG ENTERPRISE
JAN. 1983
p. 163

NEW FOR 1983

QUARTZ LCD GAME

EACH MODEL COLORS AVAILABLE: RED BEIGE

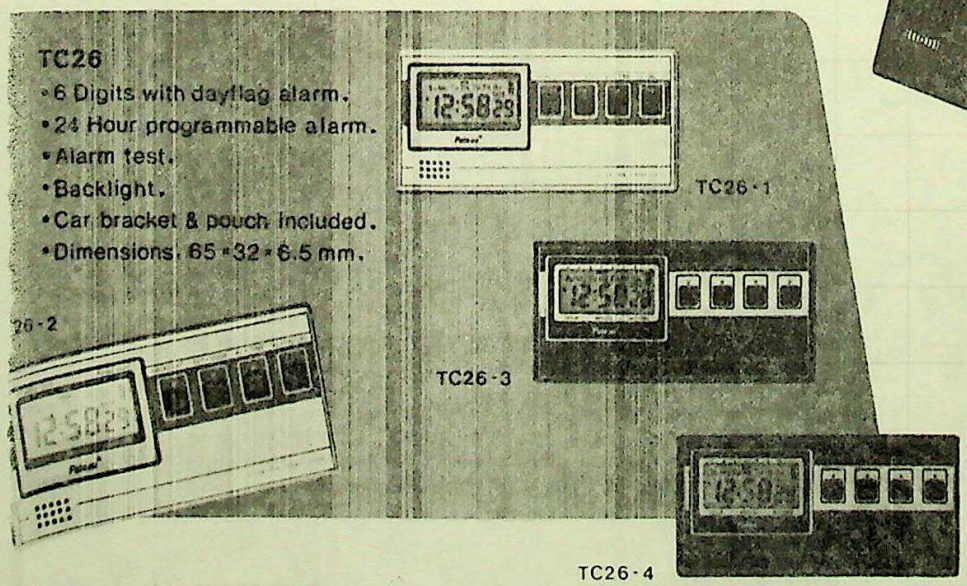
FIRE! FIRE! BATS VULTURE OCTOPUS



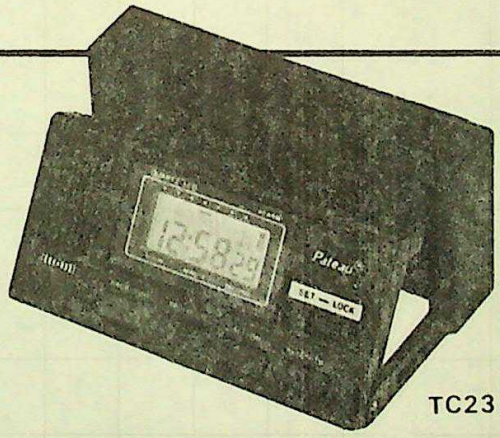
- 4 Buttons operated control of the game.
- Normal time, hour, minute, second.
- Stopwatch of counting from 0 minute, 00.0 second to 15 minutes, 59.9 seconds.
- 24 Hour alarm with alarm test. • Dimensions: 98×61×11.5 mm

PLAY & TIME ②

ULTRA-THIN
Mini travelling alarm clock



TC26
- 6 Digits with dayflag alarm.
- 24 Hour programmable alarm.
- Alarm test.
- Backlight.
- Car bracket & pouch included.
- Dimensions: 65×32×6.5 mm.



The travelling alarm clock

- 6 Digits with dayflag alarm.
- 24 Hour programmable alarm.
- Alarm test. Backlight.
- Car bracket & pouch included.
- Dimensions: 65×32×10 mm.

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MERCHANDISING
FEB. 1983
P. 58

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MODEL 318-101

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With all those superior features in one joystick, you know yourself a winning combination. And when it comes to beat games, one hand is all you need!

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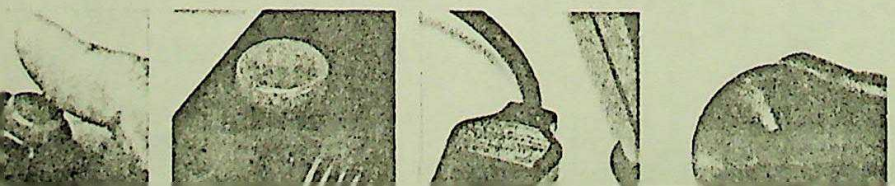


235/145R = 9809

United States Patent [19]

Smith, III

9809

[11] **4,398,086**

[45] **Aug. 9, 1983**

[54] **GAME-CALCULATOR HAVING SLIDING MASK**

[75] Inventor: **Jay Smith, III**, Pacific Palisades, Calif.

[73] Assignee: **Smith Engineering**, Santa M... Calif.

Please return to M. Feifer

[21] Appl. No.: **337,229**

[22] Filed: **Jan. 6, 1982**

[51] **Int. Cl.**[3] **G06C 7/02**

[52] **U.S. Cl.** ..... **235/145 R**; 235/419; 340/365 VL; 434/229; 364/705; 364/410

[58] **Field of Search** ..... 235/419, 145 R; 340/365 VL; 434/227, 228, 229; 377/5; 364/410, 705

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,336,530 6/1982 Kolke ..... 340/365 VL

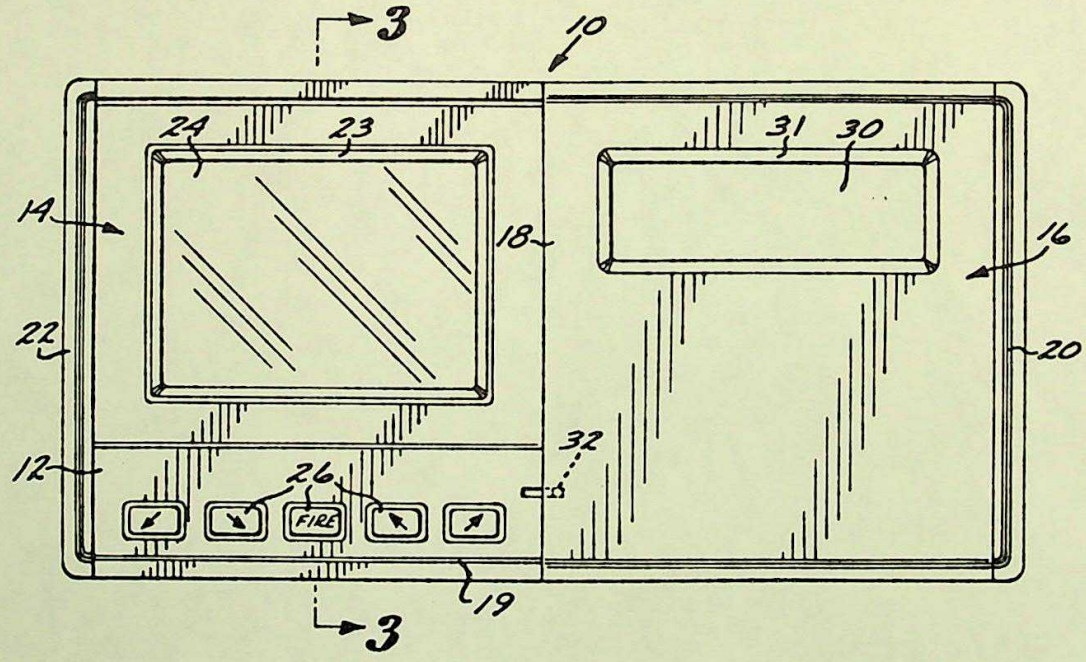
Primary Examiner—Harold I. Pitts

Attorney, Agent, or Firm—Jackson, Jones & Price

[57] **ABSTRACT**

A game-calculator having a single housing for a hand-held calculator and an electronic game each sharing the same display, with a sliding mask to alternatively cover in a first or second position either the calculator keyboard input keys, or both the game input keys and that portion of the display panel not used to display the calculator functions, with the slide also serving to position a switch which is coupled to the programmed data processor, responsive to movement of the slide from the first position to the second position, or vice versa.

8 Claims, 4 Drawing Figures



D21/48

(12) UK Patent Application (19) GB (11) 2 125 947 A

SCIENCE REFERENCE LIBRARY

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(22) Date of filing 26 Aug 1983
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(32) 30 Aug 1982
(33) United States of America (US)
(43) Application published 14 Mar 1984
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(58) Field of search F2Y

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W. P. Thompson & Co., Coopers Building, Church Street, Liverpool L1 3AB

(54) Joy stick

(57) A joy stick assembly has a joy stick (26) resiliently mounted with a rubber tyre valve stem (38) in an opening (44) through a hand holdable housing (22, 24), so that it is normally biased to a neutral position. The joy stick is manually pivotable in any one of a plurality of directions through a 360° arc, and has a conductive sphere (48) at its opposite end. Four contacts (56, 60) are shown in Fig. 2 are positioned at 90° apart around the sphere and out of contact therewith when the sphere is in its neutral equilibrium position, and the joy stick is manipulable to establish electrical connections between the sphere and individual ones or adjacent pairs of the contacts to provide a signal from the sphere to the contact or contacts. With separate electrical connections established between the sphere and the four contacts and a TV video game, the joy stick is manipulable to supply nine discrete signals to the game, four upon electrical connections between the sphere and individual ones of the contacts, another four upon electrical connections between the sphere and adjacent pairs of contacts and a further one when the sphere is in its neutral position.

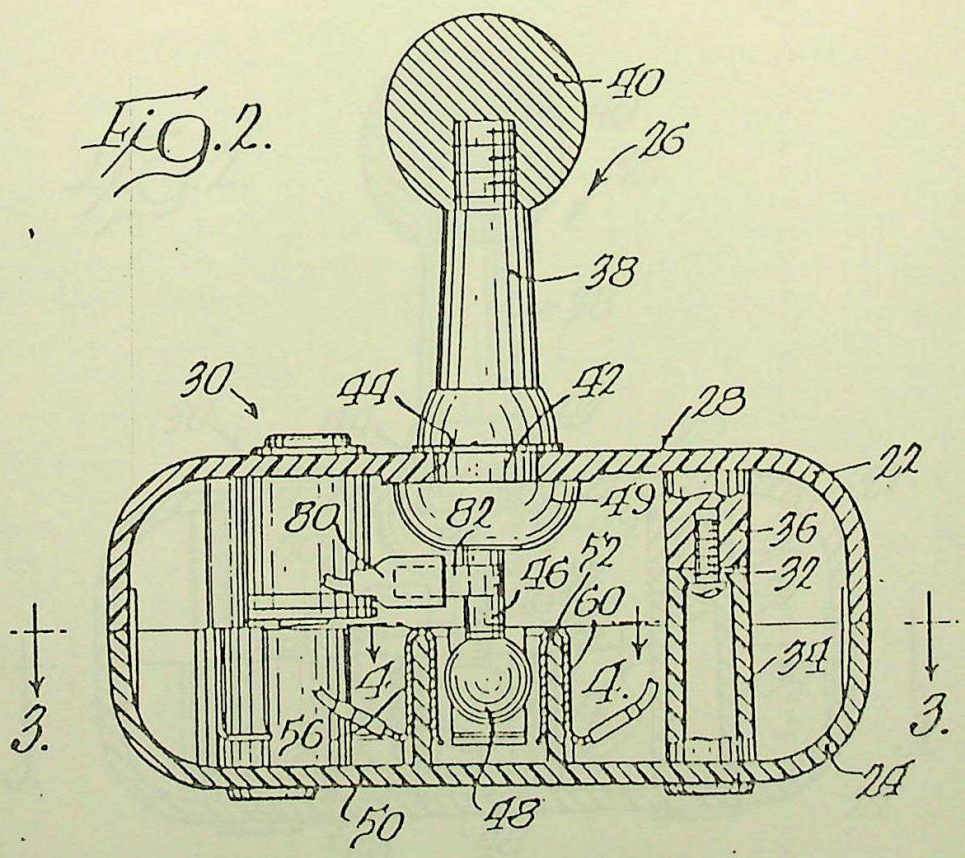

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Fig. 1.

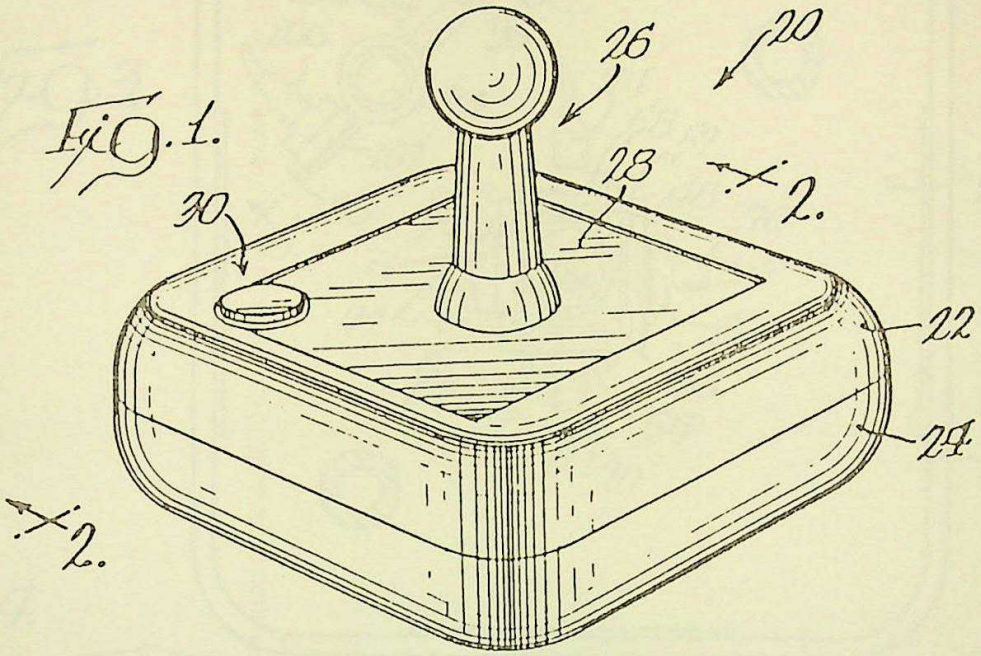
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Fig. 2.

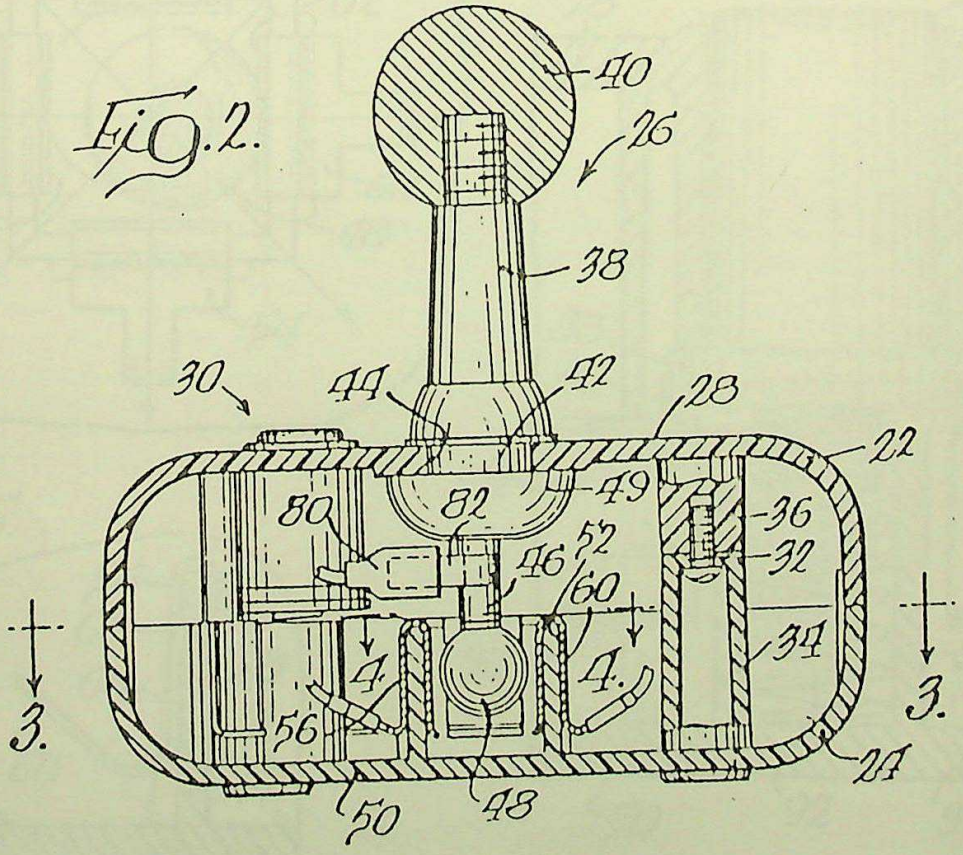
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Fig.3.

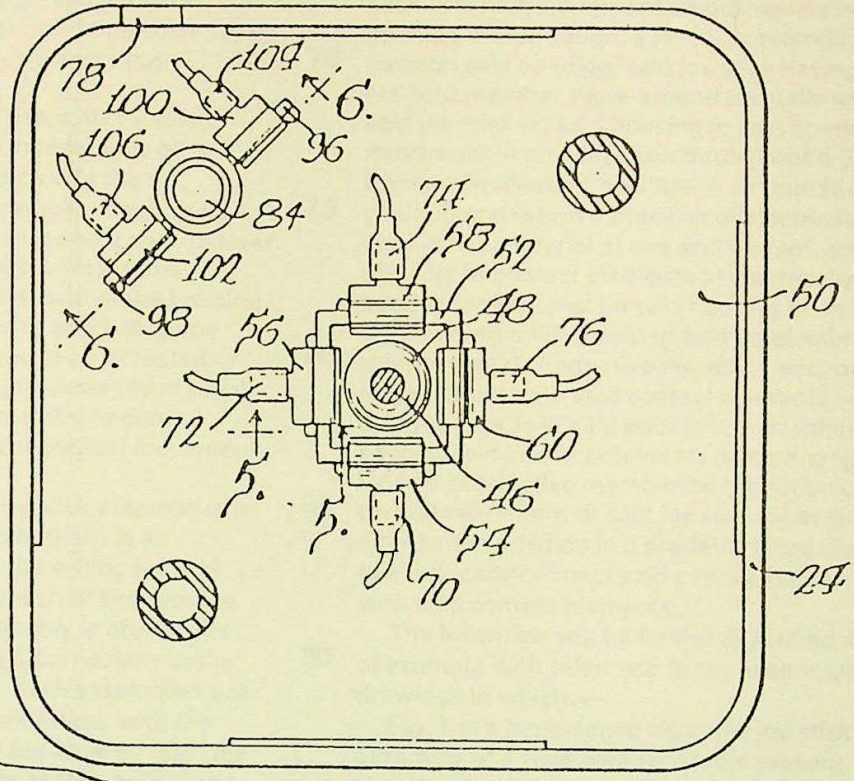


Fig.4.

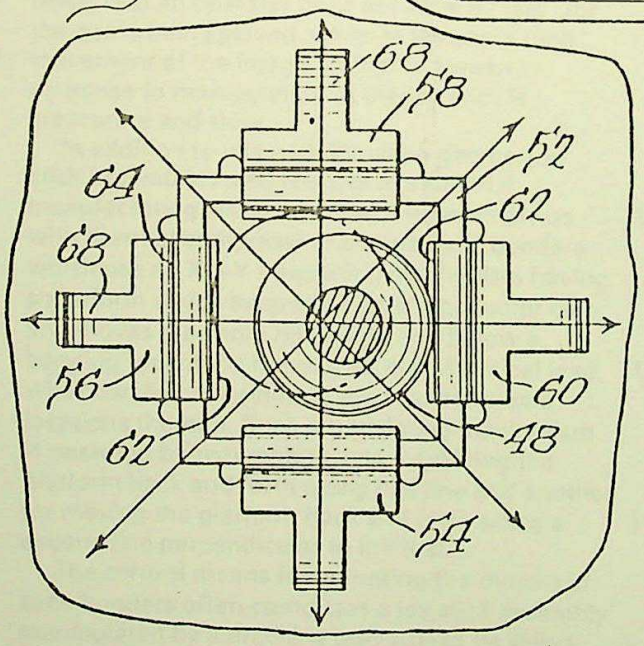


Fig.6.

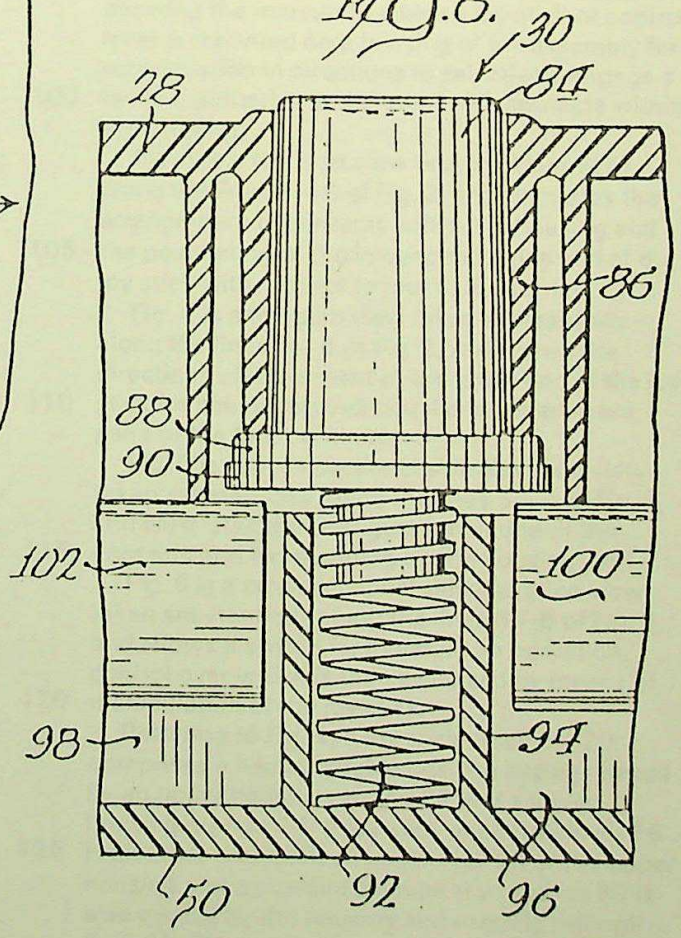
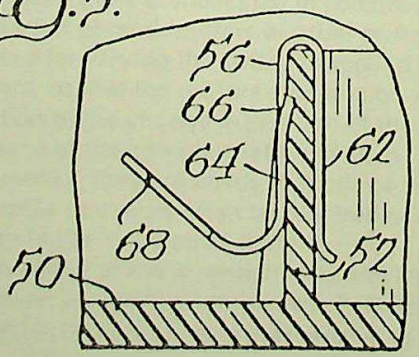


Fig.5.



SPECIFICATION

Joy stick

The present invention relates to joy stick assemblies, for example, for operating such things as TV video games and X—Y translating mechanisms.

Joy stick assemblies for use with TV video games for controlling X—Y translations of an image on a TV screen are known in the art. Conventionally, such an assembly comprises a hand holdable box-like housing and a control lever or joy stick extending through a wall of the housing. Switches or contacts within the housing are electrically connected with an input to the video game, and are arranged to be actuated or contacted by the joy stick in response to manual manipulation of the same, thereby to control bidirectional horizontal and/or vertical movement of an image on the screen.

A disadvantage of such joy stick assemblies is that, in an attempt to fabricate them in an economical manner so that the selling price of video games will be within reach of the average purchaser, the resulting assembly is often quite flimsy and prone to breakage, particularly in the hands of a child. In addition, such assemblies are often quite spongy in their operation, with the result that an operator does not have a "feel" for the game being played, while at the same time movement of the image on the TV screen in response to manipulation of the joy stick is inaccurate and slow.

In addition to use with TV video games, joy stick assemblies also find use in industrial manufacturing operations, such for example as with thermal compression or ultrasonic bonders which use an X—Y translating mechanism having a platform which supports a semi-conductor chip and moves the same relative to and below a bonding tool of the bonder, so that electrical lead wires can be connected to the chip at various locations thereon. Such a translating mechanism is operated by two motors, one for driving the platform back and forth along one line and another for moving the platform back and forth along a second line perpendicular to the first.

The control means for operating the motors of such bonders often comprises a joy stick assembly manipulated by a machine operator as he views the work area of the chip through a microscope. Conventional joy stick assemblies for this purpose have been quite complicated in construction, and have used potentiometers or other switching devices for varying the voltages applied to the motors, so that the motors stop and go as a function of the change in position of the joy stick. Because of the complex nature of such assemblies, they are costly to produce and assemble and must often be repaired or replaced due to faults in the parts thereof.

An object of the invention is to provide an improved joy stick assembly which is simple and rugged in construction, is inexpensive to produce operator and can be used as a replacement part for a conventional joy stick device.

In accordance with the present invention, a joy stick assembly comprises a housing having an opening therethrough, a joy stick extending through said opening, said joy stick having a resilient member there-around pivotally mounting said joy stick on said housing in said opening for movement in any direction throughout a 360° arc from an equilibrium position to an operative position and return a member of electrically conductive material at one end thereof; and a plurality of contact elements of electrically conductive material on said housing in an array in surrounding relationship to said conductive member, said conductive member being out of engagement with said contact elements when said joy stick is in said equilibrium position and each of said contact elements being engageable by said conductive member as a function of pivotal movement of said joy stick away from said equilibrium position in a predetermined direction to electrically connect said conductive member with said contact elements.

The invention will be further described, by way of example with reference to the accompanying drawings in which:—

Fig. 1 is a perspective view of a joy stick assembly of a type with which the present invention may advantageously be used;

Fig. 2 is a cross sectional side elevation view taken substantially along the lines 2—2 of Fig. 1, showing the manner in which a joy stick or control lever is mounted on a housing of the assembly for manipulation in directions to selectively engage a lower conductive end thereof with contacts within the housing;

Fig. 3 is a top plan view taken substantially along the lines 3—3 of Fig. 2, and illustrates the arrangement of contacts within the housing and the positioning of the lower conductive end of the joy stick with respect to four of the contacts;

Fig. 4 is a top plan view taken substantially along the lines 4—4 of Fig. 2, and shows the directions of movement of the lower end of the joy stick for contacting individual ones or adjacent pairs of the four contacts;

Fig. 5 is a cross sectional side elevation view taken substantially along the lines 5—5 of Fig. 3, and illustrates the configuration of one of the contacts and its mounting on the housing; and

Fig. 6 is a cross sectional side elevation view taken substantially along the lines 6—6 of Fig. 3, and shows a switch for initiating an operation, control over which is then exercised by means of manipulation of the joy stick.

Referring to Fig. 1, a joy stick assembly 20 comprises a hand holdable box-like casing formed by an upper housing portion 22 and a lower housing portion 24. A joy stick or control lever 26 is pivotally carried in an upper wall 28 of the upper housing and a pushbutton type start switch 30 is also carried by the housing and extends through the wall. The joy stick assembly is particularly

HONG KONG ENTERPRISE 4/84
P.74

NEW GAMES FOR 1984

DIGITAL
ELECTRONIC
QUARTZ LCD
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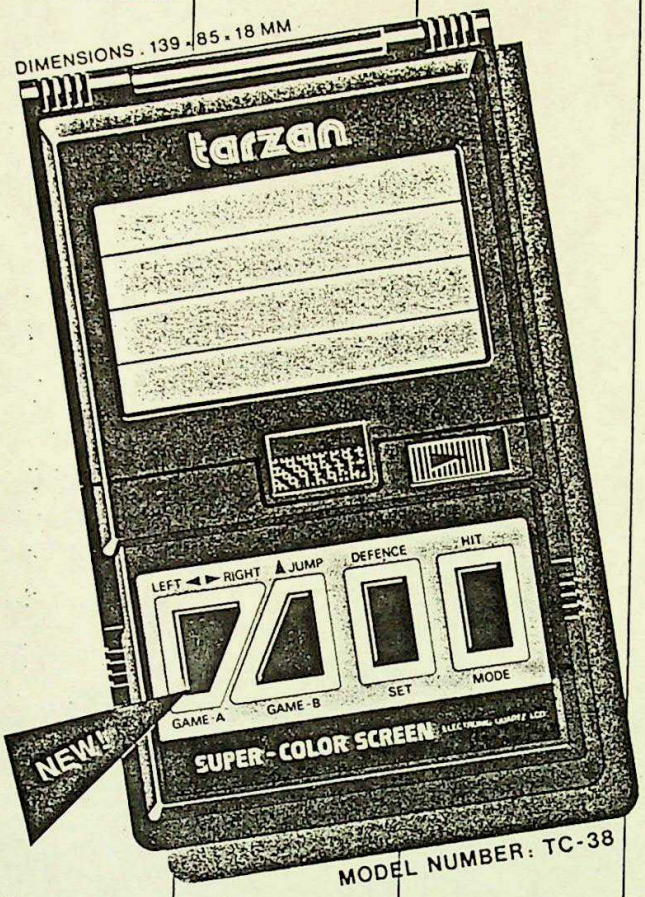
SUPER COLOR SCREEN



Moving figures on the display in the past have been a simple dull black look but NOW with advanced technology - moving figures are in TRUE VIVID — CO OR

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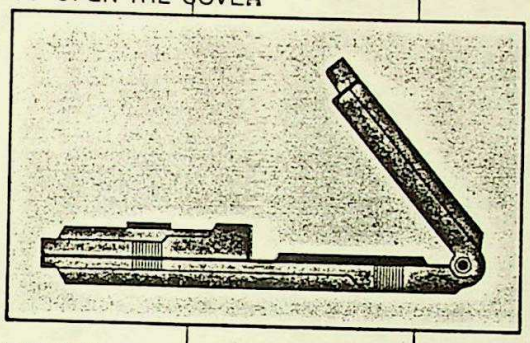

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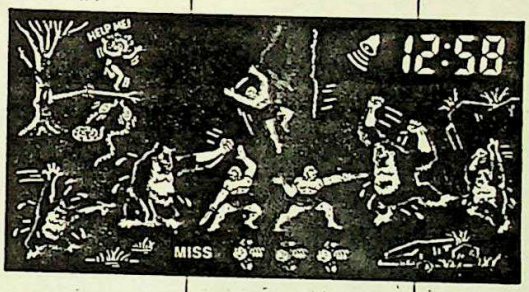

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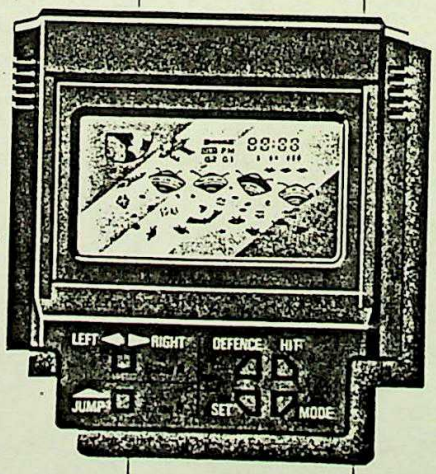

Ten cartridges available.

Each model colors available:

■ red ■ blue

MODEL NUMBER TC-40

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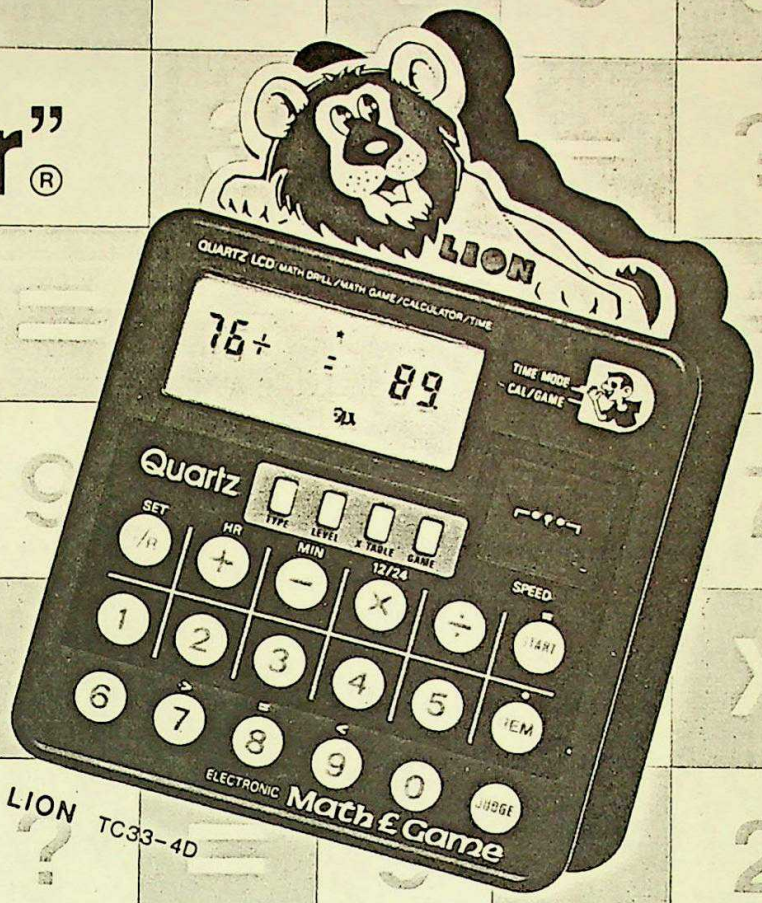
1ST/F., & 3RD/F., KWAI CHUNG, N.T. HONG KONG

The Kiddie "Computor"®

MATH DRILL
MATH GAME
CALCULATION
TIME



LION TC33-4D

FEATURES:

- PROGRAMMABLE / PREPROGRAMMED MATHEMATICAL TABLES
  Learn efficiently and quickly the multiplication, division, subtraction and addition tables.
- FULL FUNCTION CALCULATOR
  Use it as a calculator.
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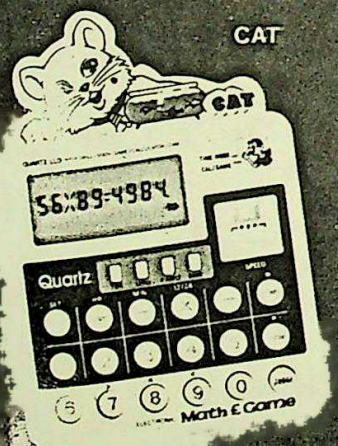
  Two exciting and challenging skill levels.
- TIME
  Teach your children how to tell time.
- DIMENSIONS
  Dimensions: 130 × 92 × 12 mm.

Note: Please acknowledge that the standards and external appearance may be changed without notice when so required for improvement.



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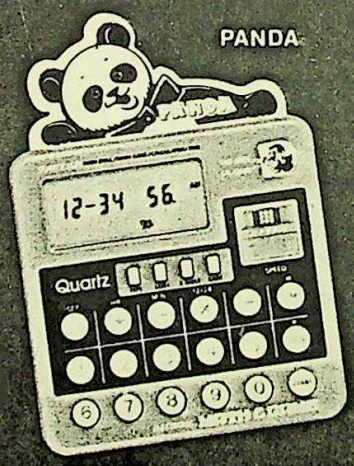


PANDA

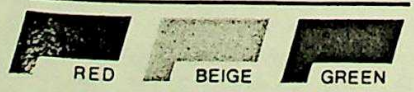
TC33-1B

DOG

TC33-3A

ROBOT

EACH MODEL COLORS AVAILABLE



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TELEX: 53909 BALDA HX. TEL: 0-264221-4 (4 lines)

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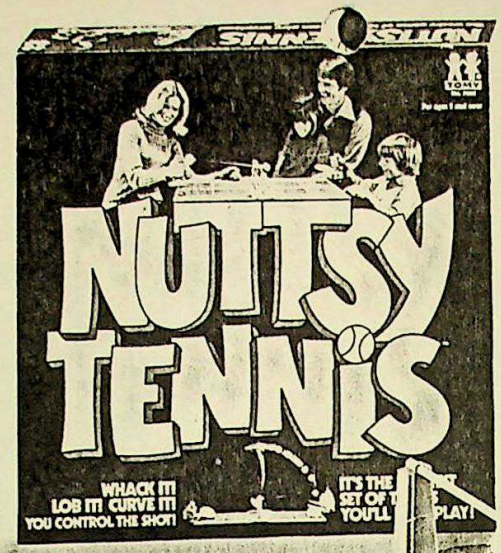

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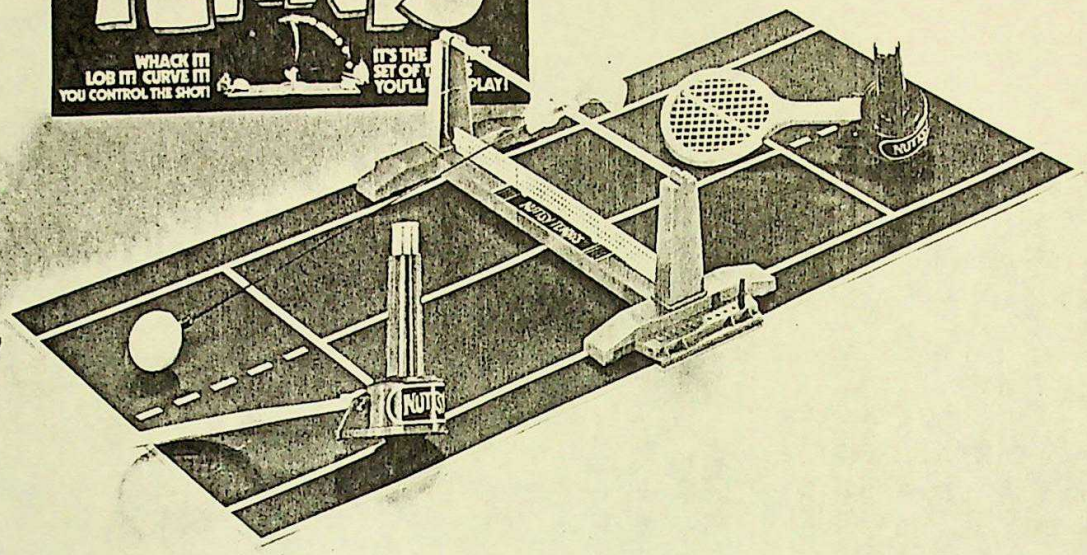
Opponents try to outwit and outwhack each other with tw spring-activated racquets that send the counter-balanced ba smashing across the court. Keep your eye peeled for tric shots. Quick shots. Flip shots. Score pegs on the sideline tally points for sets and matches. Complete layout measure 16" x 32". For ages 5 and u
Stock No. 700
Standard Pack:
Carton Weight: 15 lb
Individual Size: 17" x 17" x 2¾
U.S. PAT. NO. 3,904,20



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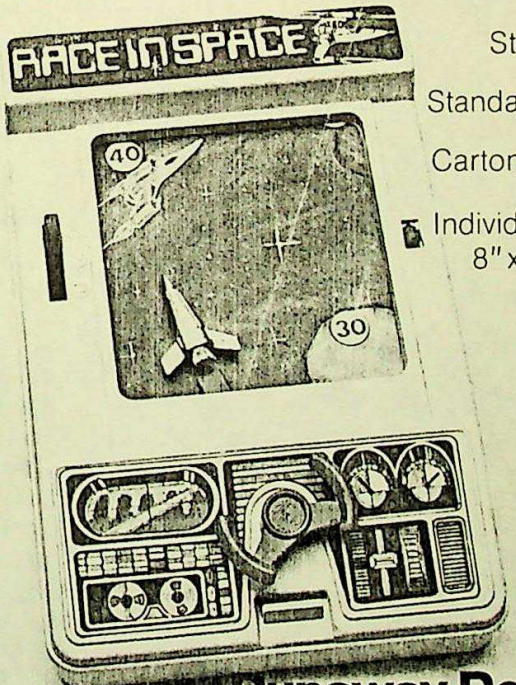
Kids'll love being the backseat driver with the simulated car you can carry wherever you go. Realistic dashboard has finger-sized steering wheel that really guides the car down the moving highway. Obstructions and skill-challenging situations test the driver's coordination and speed reactions all the way to the end. Puts kids 6 and up in the driver's seat. Operates on one "C" battery, not included.
Stock No. 7011
Standard Pack: 12
Carton Weight: 10 lbs.
Individual Size:
8" x 5½" x 2"



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Runaway Rock

When kids see Runaway Rocket, it's going to runaway best seller. It has all the fun of Drive Yourself C but it goes a lot further. It goes all the way into outer s Realistic rocket controls are finger-sized and you actually guide the rocket through the galaxy dodging meteors, moons, aerolites, celestial bodies, comets, pla and assorted space stuff. It puts little astronauts' coordina and speed reaction to a tough test. Operates on one battery, not included. For space travelers 6 an

Hong Kong Ent 1984

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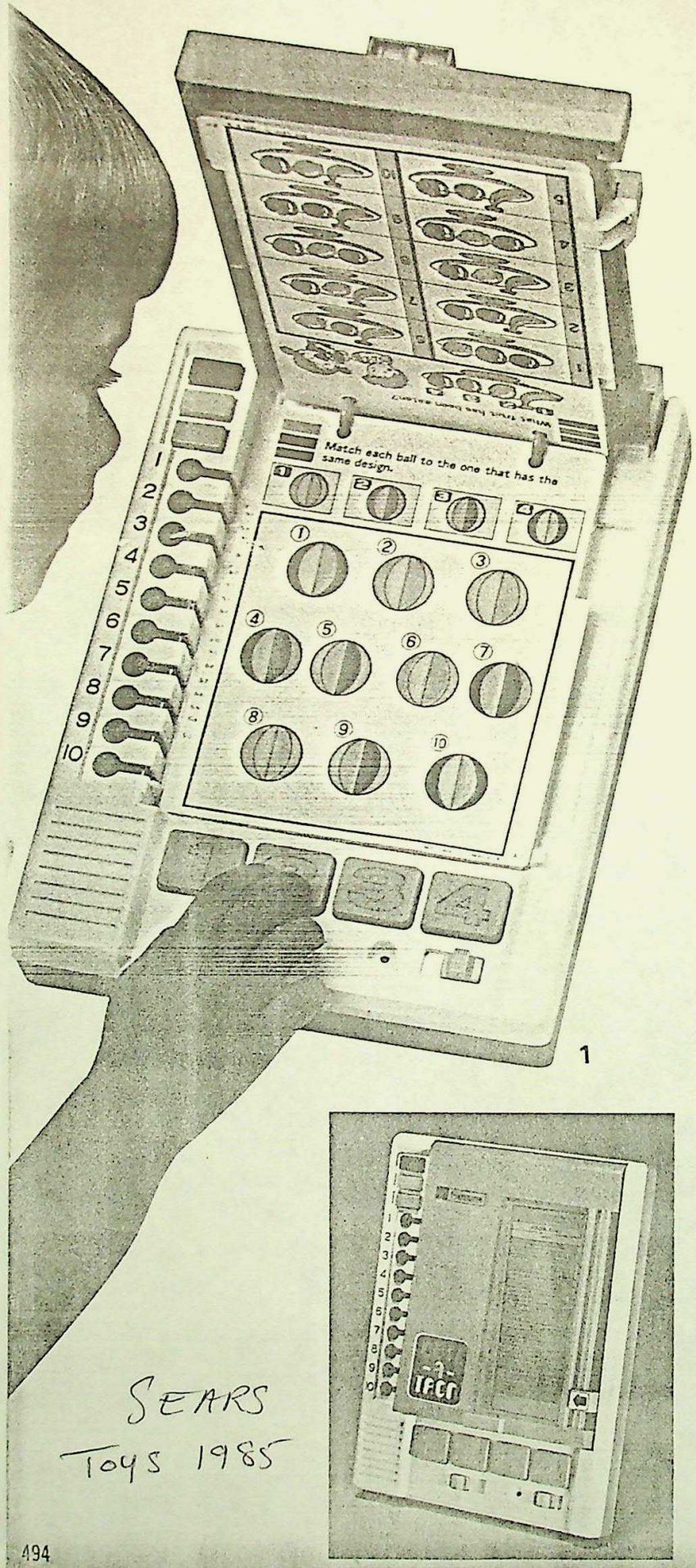

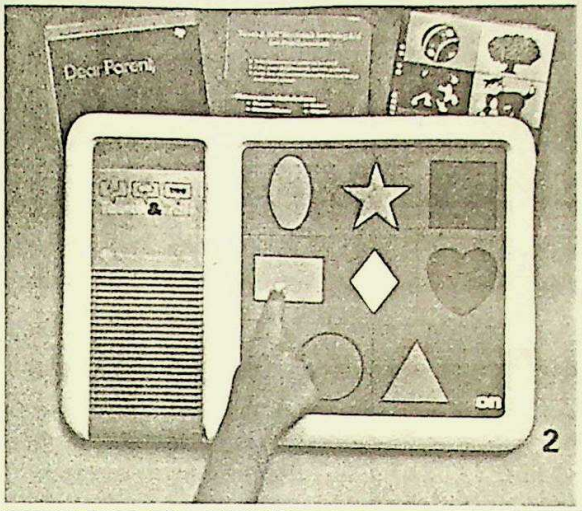

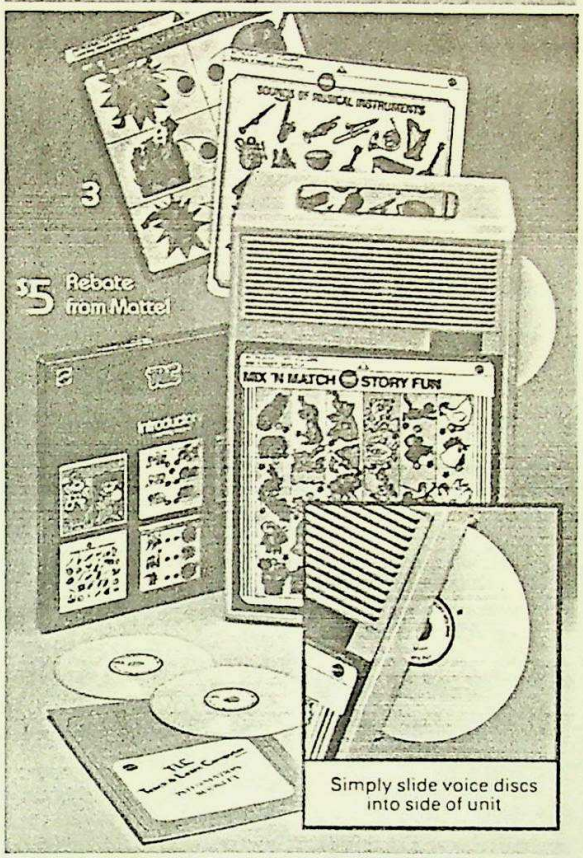

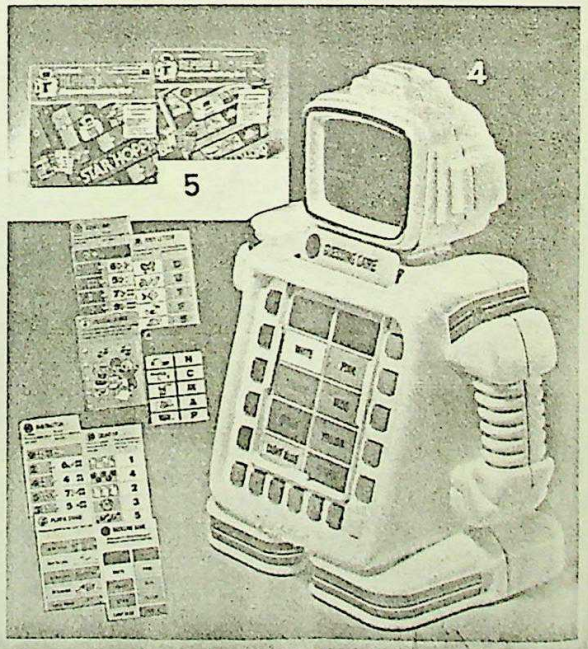

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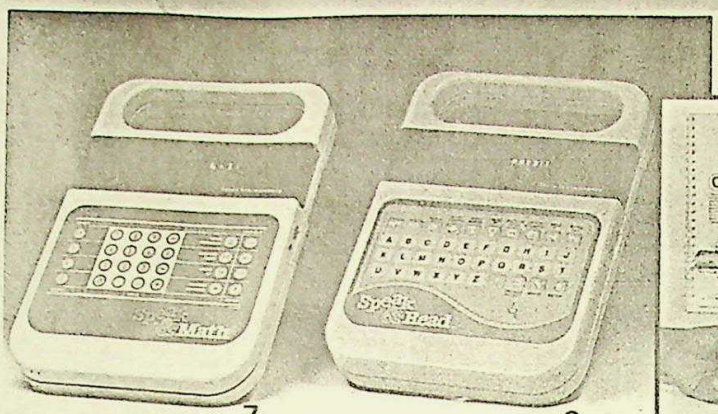
Toys 1985



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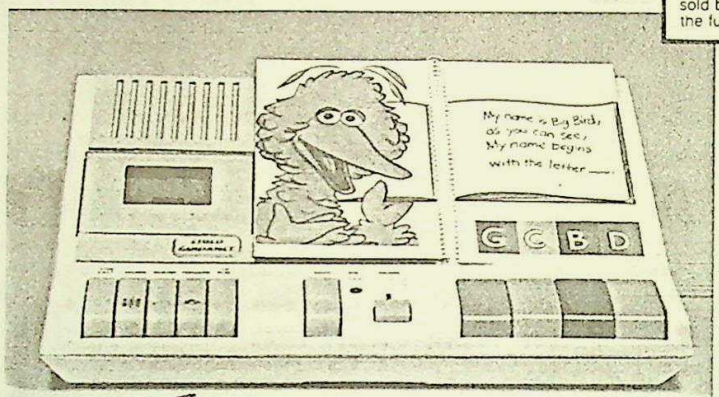
Add-on Module Sets sold below continue the fun and learning



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$24.99 (1) The Quiz-a-Tron uses lights and sounds to stimulate your child's interest. Skills needed to understand math, logic, words and shapes are developed as your child "plays" the games. A musical salute responds to correct answers. 3 speed settings. Additional booklets sold below continue the learning. Plastic. Imported. Uses 8 "AA" batt. (not incl.), sold below, right.
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Extra Question Booklets. Each 38-page booklet has 380 questions to challenge children 4 to 8 yrs.
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Save $2 on Extra Question Booklet Set with Level I thru Level IV above. Sep. prices total $11.96.
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(2) Teach your preschooler colors, common objects and shapes with Touch & Tell. Your child simply presses the picture panel and the game voice names the picture. Then it names a picture for your child to locate. It's fun and educational. Incl. 2 double-sided picture panels. Plastic. Uses 2 "D" batt. (not incl.), sold below, right. Warranted by Texas Instruments, write for free copy, see pg. 323.
For ages 2 to 5 years.
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Extra Learning Modules with picture overlays for (2)

Module Types	Catalog Number
E.T.®—Let's you hear E.T.'s voice! 8 picture panels feature scenes from movie	49 N 17846
Alphabet Fun—Helps identify letters and words beginning with those letters	49 N 17849
Number Fun—Identify numbers and quantities	49 N 17851
Animal Kingdom—Helps with animal names and the sounds they make	49 N 17853
All About Me—Helps preschoolers discover "themselves"	49 N 17855
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(3) Introduce your child to a world of knowledge with the Teach & Learn Computer™. A friendly voice recording and visual aids develop skills in reading, vocabulary, math and other areas. Incl. 2 discs, 6 overlays. Addl. learning modules, expand the learning and fun, sold sep. at top of next column. Uses 2 "D" alkaline batt. and 9-volt batt. (not incl.), sold at right. Warranted by Mattel, write for free copy, pg. 323. $54.99 after Mattel rebate, see pg. 498.
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49 N 17704—Wt. 1 lb. 8 oz.....Full Price $59.99

Additional Learning Modules for (3). Incl. 3 discs, 6 panel overlays for each.

Learning Volume	Catalog Number	Age
Sesame Street**—Games	49 N 17705	3, 4, 5
Sesame Street**—Learning about Sounds and Places	49 N 17707	3, 4, 5
Reading Readiness™ I	49 N 17711	3, 4
Learning About People and Animals	49 N 17715	3, 4
Stories and Rhymes	49 N 17717	3, 4
Learning About my World™	49 N 17719	3, 4
Learning About Sounds	49 N 17721	3, 4
Reading Readiness™ II	49 N 17722	5, 6
Basic Learning™ II	49 N 17723	5, 6
Games and Mazes™	49 N 17724	5, 6

Shipping weight 8 ounces .....Each $12.99
**Trademark Children's Television Workshop

(4) Alphie II teaches children lessons in math, spelling, colors and problem solving. He'll provide music for a sing-along or a game of musical chairs. 4 two-sided activity cards provide a variety of things to do. Add-on activity sets sold below. Automatically shuts off to save power. Requires 4 "AA" batteries (not included), sold at right. Warranted by Playskool; write for free copy, see page 323.
For ages 3 to 8 years.
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(5) Alphie II Activity Sets provide 2 learning activities geared to different lessons at overlapping age levels . . . so the fun, games and lessons go on and on. Each includes 4 double-sided learning cards, a double-sided gameboard and playing pieces. You get "Basic Numbers & Shapes" for ages 3 to 5 years and "Get Ready to Read" for ages 4 to 6 years.
49 N 17632—Shpg. wt. 1 lb. $8.99

(6) Talk 'n Play Cassette Player/Recorder Learning Set teaches as your child participates in games and songs. A pre-recorded friendly voice coordinates with the workbook to ask a question; your child responds using the brightly colored buttons. "Can you find your way to Sesame St.**" program incl. Add-on programs are sold below. Req. 4 "D" batt., (not incl.), sold at right. Warranted by CBS Toys, write for free copy, see page 323.
Shipping weight 5 pounds 8 ounces.
For ages 3½ years and up.
49 N 17752.....$49.99

Additional software programs for Talk 'n Play (6) above. Shpg. wt. 6 oz. ea.
49 N 17753—Sesame St.** Fairy Tales. $7.99
49 N 17754—Visit with Mother Goose 7.99
49 N 17756—Baby Animals 7.99
49 N 17759—The Reading Robot. 7.99

(7, 8 and 10) Texas Instruments electronic learning toys help teach basic learning skills in a fun way. Req. 4 "C" batt., or AC adapter, sold sep. below. Plastic. Warranted by T.I., write for free copy, see pg. 323. (7, 10) available in braille.

(7) Speak & Math covers 100,000 problems on tables, decimals and more. Workbook incl. Wt. 1 lb. 14 oz.
For ages 5 to 12 years.
49 N 17605 .....$39.99
49 N 17606—Braille Speak and Math 39.99

(8) Speak and Read develops word recognition, pronunciation and vocabulary. Activity book incl.
49 N 17816—Shpg. wt. 1 lb. 12 oz. $39.99

(9) Additional Learning Modules for (8). Incl. plug-in module and booklet. Shpg. wt. 4 oz. each.

Module Type	Cat. No.	Grade	Price
Dog on a Log—rhyming words, plural endings	49 N 17822	1	$12.99
On Track—consonant blends	49 N 17823	1	12.99
Who's Who at the Zoo—contractions	49 N 17821	2	12.99
A Seal that could Fly—comparatives; long, longer, etc.	49 N 17817	2	12.99
Third Circle—"r" controlled vowels (i.e. "ir" in circle)	49 N 17841	2	12.99
Millionth Knight—letter/sound relationships (eg. "kn" in knee)	49 N 17842	3	12.99

(10) Speak and Spell, 4 skill levels, workbook.
For ages 6 and up. Shpg. wt. 1 lb. 9 oz.
49 N 17814 .....$39.99
49 N 17833—Braille. 39.99

Additional Learning Modules for (10) (not shown). Incl. plug-in module and lesson booklet. Wt. 4 oz. each.

Module Type	Cat. No.	Grade	Price
Basic Builders—helps sound out words	49 N 17837	2, 3	$12.99
Vowel Power—helps, vowel patterns	49 N 17838	2, 3, 4	12.99
Super Stumpers™—helps with problem words	49 N 17839	4, 5, 6	12.99
Mighty Verbs—helps, verb tenses	49 N 17843	4, 5, 6	12.99
Super, Super Stumpers—prepares for high school	49 N 17844	7, 8	12.99
Vowel Ventures—helps with difficult vowel combinations	49 N 17845	6, 7, 8	12.99

AC Power Adapter for (7, 8, 10) above (not shown).
49 N 17806—Shpg. wt. 1 lb. 8 oz. $6.79

DieHard Alkaline Batteries

Size	Pkg	Catalog No	Wt	Price
"AA"	2	49 N 30909	2 oz	$1.79
"C"	2	49 N 30929	5 oz	2.19
"D"	2	49 N 30939	10 oz	2.19
9-V	1	49 N 30949	2 oz	2.19

TOYS 1985

Turn on a mind

THE FUTURE TODAY IN ELECTRONIC EDUCATION

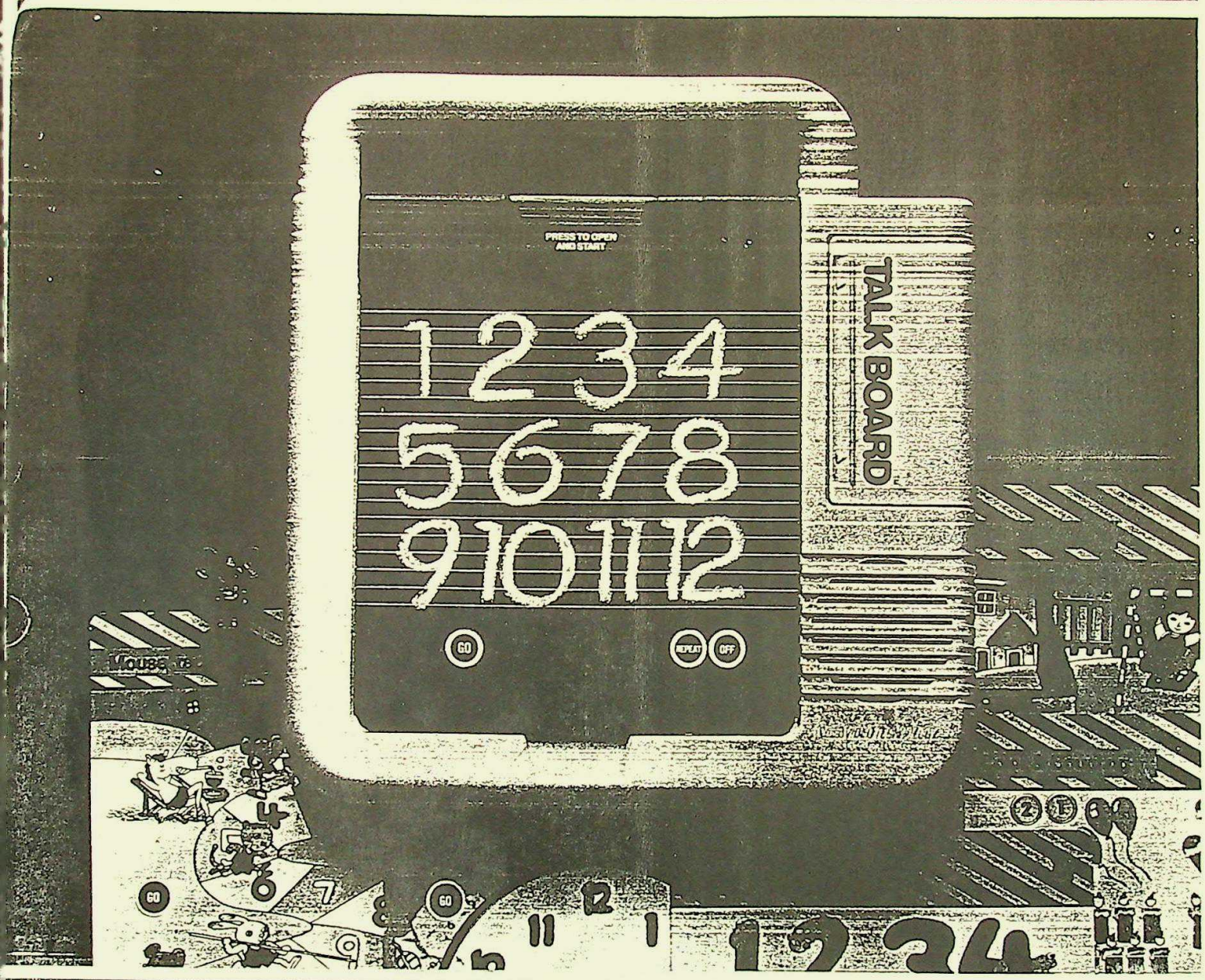
VIDEO
TECHNOLOGY
INDUSTRIES INC.
1987
REF. 29/003060

- TYPE RIGHT
- LEARNING WINDOW
- TALK BOARD
- SMART START
- NUMBER CRUNCHER
- WHIZ KID
- TALKING WHIZ KID
- LESSON ONE
- BASIC TUTOR
- WIZARD
- TALKING FOOTBALL
- TALKING BASEBALL
- RHYTHMIC 6
- RHYTHMIC 2
- MUSIC MAJOR

© VTECH VIDEO TECHNOLOGY 1987
EDUCATIONAL ELECTRONICS

TALK BOARD™

"Computer talk" makes learning fun and easy!



- New, ... synthesize ... phrases and ... makes learning ... ble sets ... program ... ing counting ... colors, shapes, ... animal sounds ... alphabet, ... me and more. ... Built in ... handle ... features ... school electronic ... board game ... to play while ... teaching ... Rounded ...
- Battery operated (4 AA cells) or AC adaptor

Stock #80-0992
Casepack:
Case wgt. 28 lbs
Cube 2.0

VIDEO TECHNOLOGY INDUSTRIES INC.
1987
REF. 29/003060

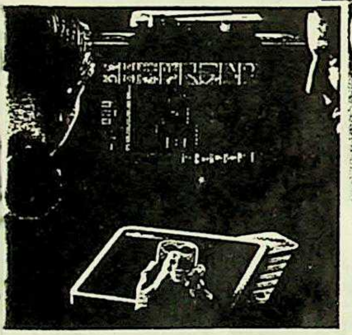
1990

VIDEO
TECHNOLOGY
INDUSTRIES INC.
1990
REF. 29/003060

Electronic toys & games for kids

SOCRATES EXPANSION CARTRIDGES AND ACCESSORIES

Stock No. 80-0992 **FACTS 'N FRACTIONS™**
An introduction to fractions, mixed numbers, and decimals
Stock No. 80-1054 **AROUND THE WORLD™**
An adventure in world geography
Stock No. 80-1085 **STATE TO STATE™**
A journey around the United States
Stock No. 80-1075 **MEMORY MANIA™**
Memory games that challenge
Stock No. 80-1076 **HODGE PODGE™**
Word games that boggle the mind
Stock No. 80-1132 **GAME WIZARD™ *(NEW)***
Games of strategy and logic
Stock No. 80-1084 **MYSTERY PUZZLES™ *(NEW)***
They aren't what they appear to be
Stock No. 80-1077 **AMAZING MAZES™**
Find your way through some of the zaniest mazes
Stock No. 80-1127 **ASSORTMENT**
Look for these cartridges to come
Stock No. 80-1250 **HISTORY HYSTERIA™ *(NEW)***
Stock No. 80-1249 **SUPER SCIENCE™ *(NEW)***
Case Pack 36 master/6 inner
Case Wt. 15 lbs. 15 oz. ***Cube*** 1.78



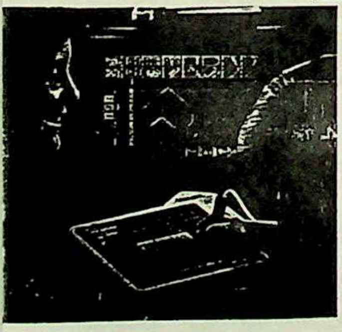
MOUSE SYSTEM™

For use with Socrates® Educational Video System
Challenges the most creative artist!

For ages 7 and up

- Wireless remote controls
- Includes Computer Aided Drawing system (CAD) Professor cartridge that introduces architectural, interior, and textile design
- Battery operated (4 "AA" cells not included)

Stock No. 80-0998
Case Pack 6 ***Case Wt.*** 16 lbs. 1 oz. ***Cube*** 1.88



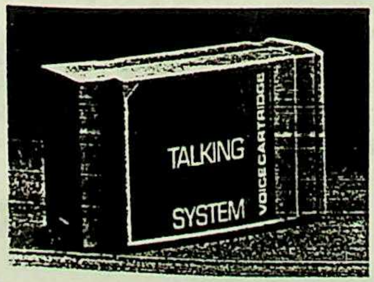
TOUCH PAD™

For use with Socrates® Educational Video System
Helps preschoolers learn using the magic of Socrates®!

For ages 3 and up

- Large, touch sensitive drawing area
- Socrates® takes children step by step through each activity
- Expandable with optional cartridges
- Battery operated (4 "AA" cells not included)

Stock No. 80-0997
Case Pack 6 ***Case Wt.*** 15 lbs. 8 oz. ***Cube*** 1.91



VOICE CARTRIDGE

Stock No. 80-0991
Case Pack 24 master/6 inner
Case Wt. 9 lbs. 1 oz. ***Cube*** 1.09

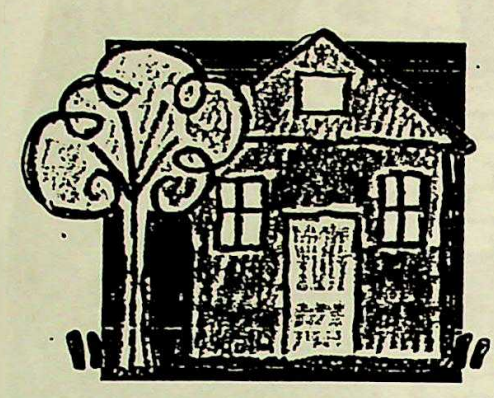
VIDEO TECHNOLOGY INDUSTRIES INC.
1990
REF. 29/003060

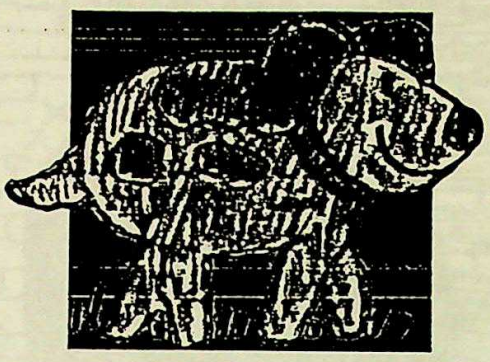
VTI™ 1991

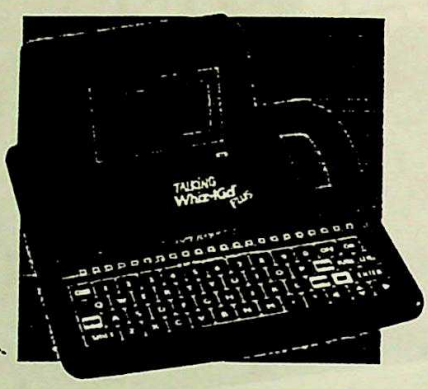
VIDEO TECHNOLOGY INDUSTRIES INC.

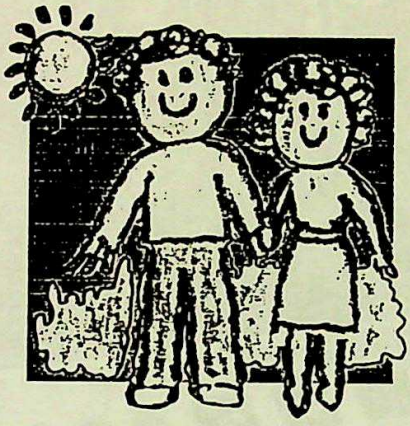
1991

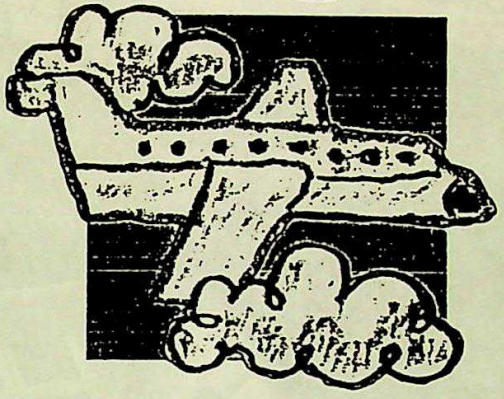
REF. 29/003060

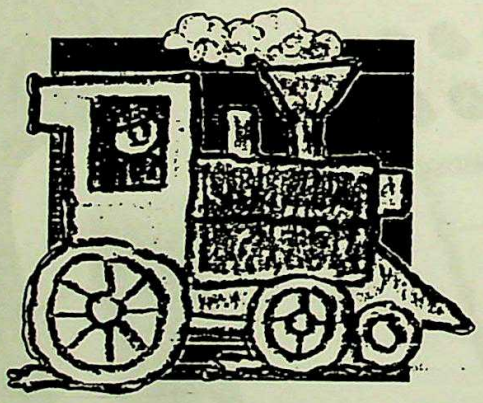


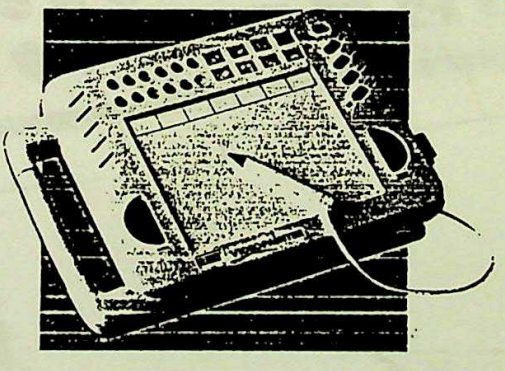


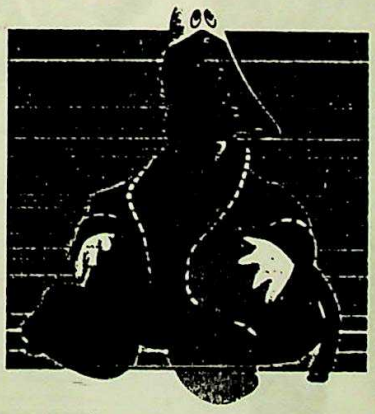


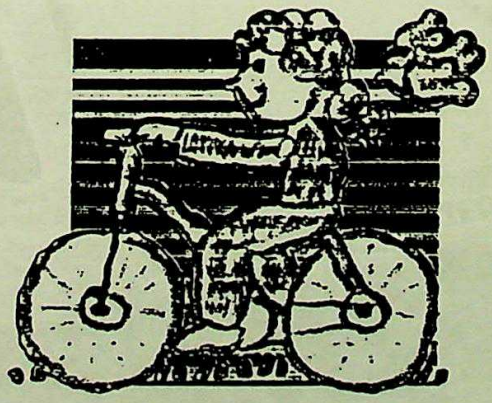


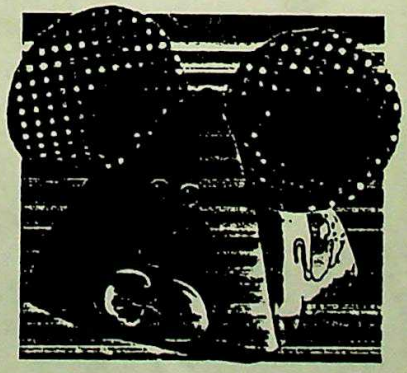




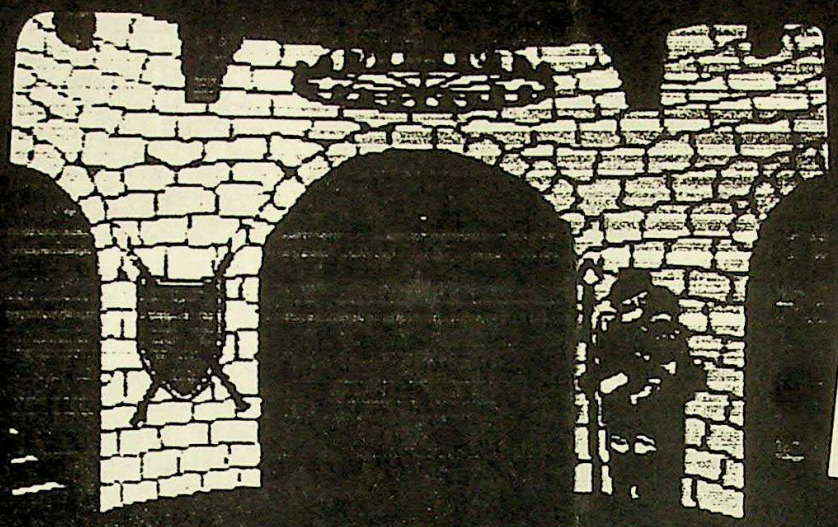




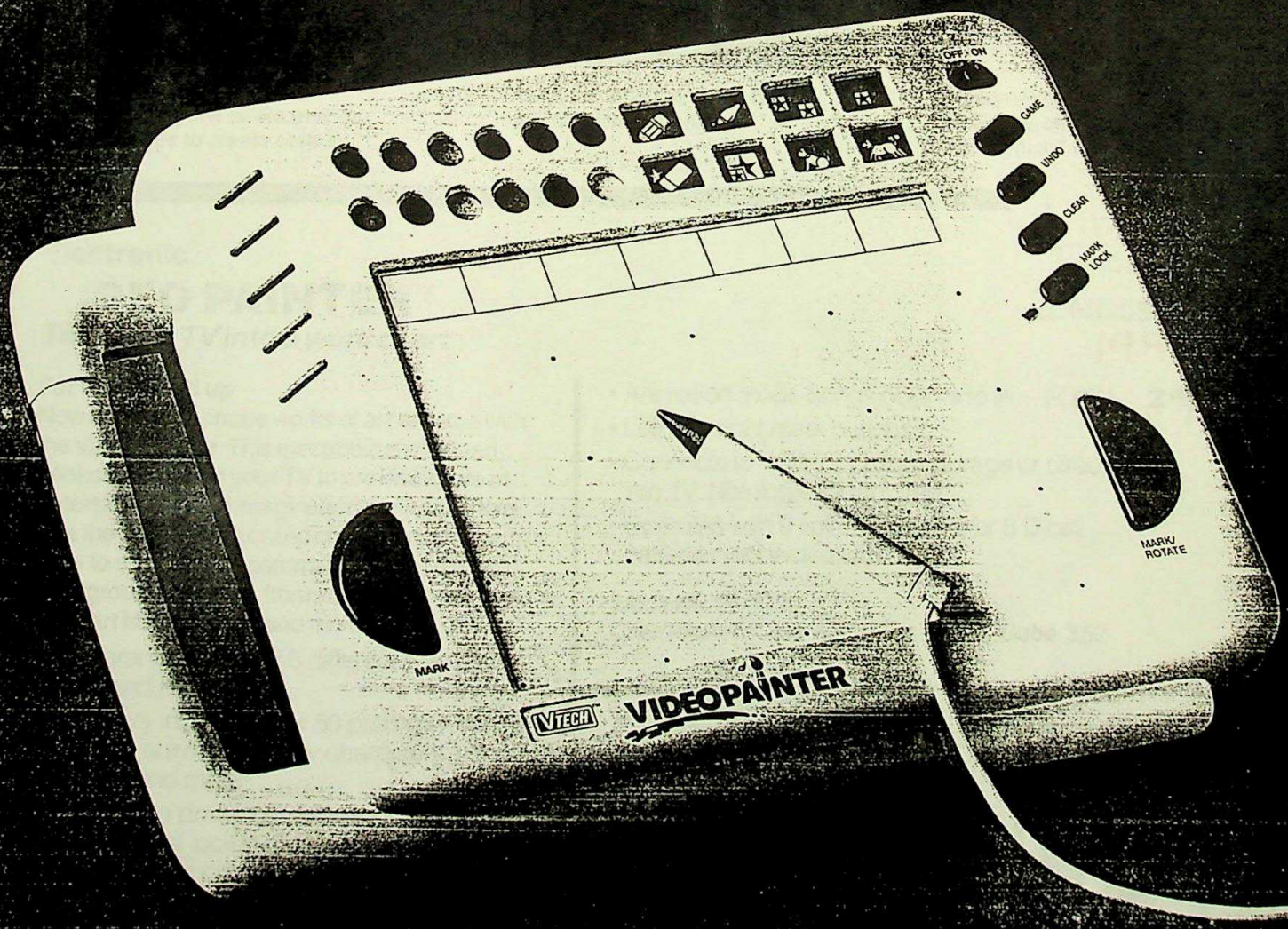


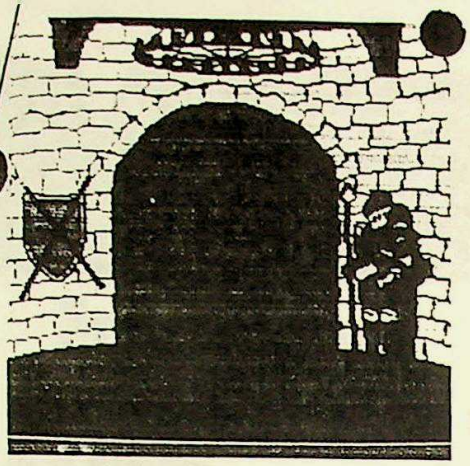


VIDEO TECHNOLOGY

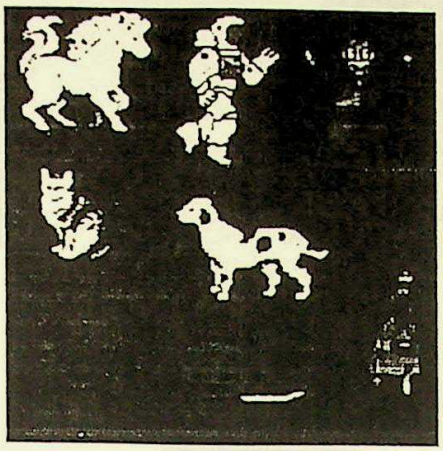


VIDEO
TECHNOLOGY
INDUSTRIES INC.
1991
REF. 29/003060
PAGE 25

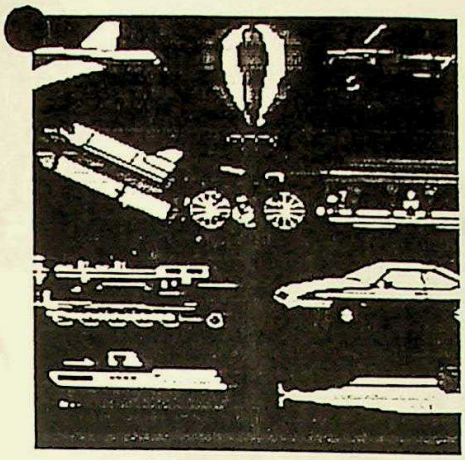




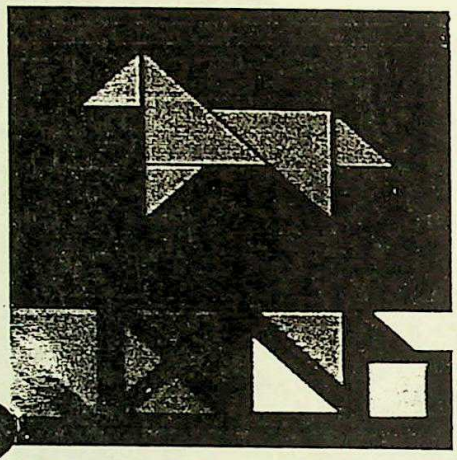
Predrawn backgrounds set the stage for quick, easy art.



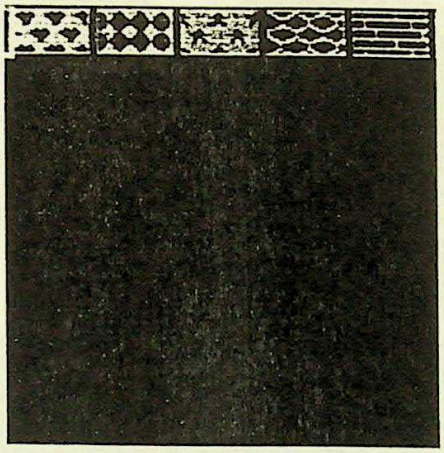
Select real life or fantasy characters



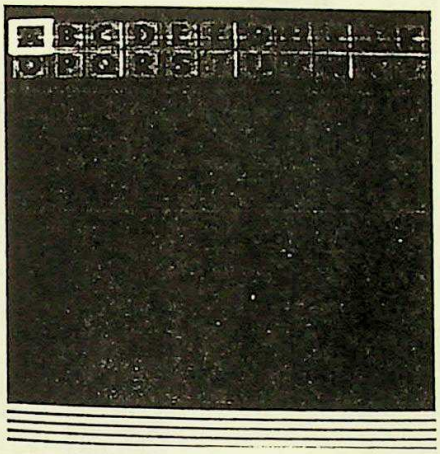
Special animation mode moves vehicles across the screen



Tangram puzzles with 2 challenging levels. Rearrange the shapes to create objects.



Paint and fill in using 12 colors or 6 different patterns



Personalize artwork or create screen labels with the easy to use "Typing" mode

Electronic

VIDEO PAINTER™

Turn your TV into a work of art

VIDEO TECHNOLOGY INDUSTRIES INC.
1991
REF. 29/003060

For ages 5 and up

Now it's easy to create works of art at home with the Video Painter. This electronic sketch pad hooks directly into your TV to provide hours of entertainment and imagination to young artists. Use the special object and character libraries, easy to use drawing commands, and predrawn backgrounds, or start from scratch. Anyway you try it, art is now easier and more fun!

- 12 Vibrant colors and 6 different patterns to draw and paint with.
- Art library includes over 50 predrawn vehicles, shapes, animals, fantasy characters, people, stamps and more!
- Easy to use drawing commands and attached pen. Special lock button holds Video Painter in the drawing mode. Move, copy, or enlarge pieces of art to touch up pictures.
- Animation mode brings objects to life
- Left and right mark buttons.
- Connects to VCR for picture storage or directly into TV. Nothing else required.
- Operates with 9 volt AC adapter or 6 D cell batteries (not included).

Stock No. 80-1300
Case Pack 4 ***Case Wt.*** 18 lbs. 4 oz.. ***Cube*** 3.52

NEW NEW

NATIONALLY ADVERTISED

AS SEEN ON TV

VTECH™

Smart Play

VIDEO TECHNOLOGY INDUSTRIES INC.
1992
REF. 29/003060

ELECTRONIC/TALKING

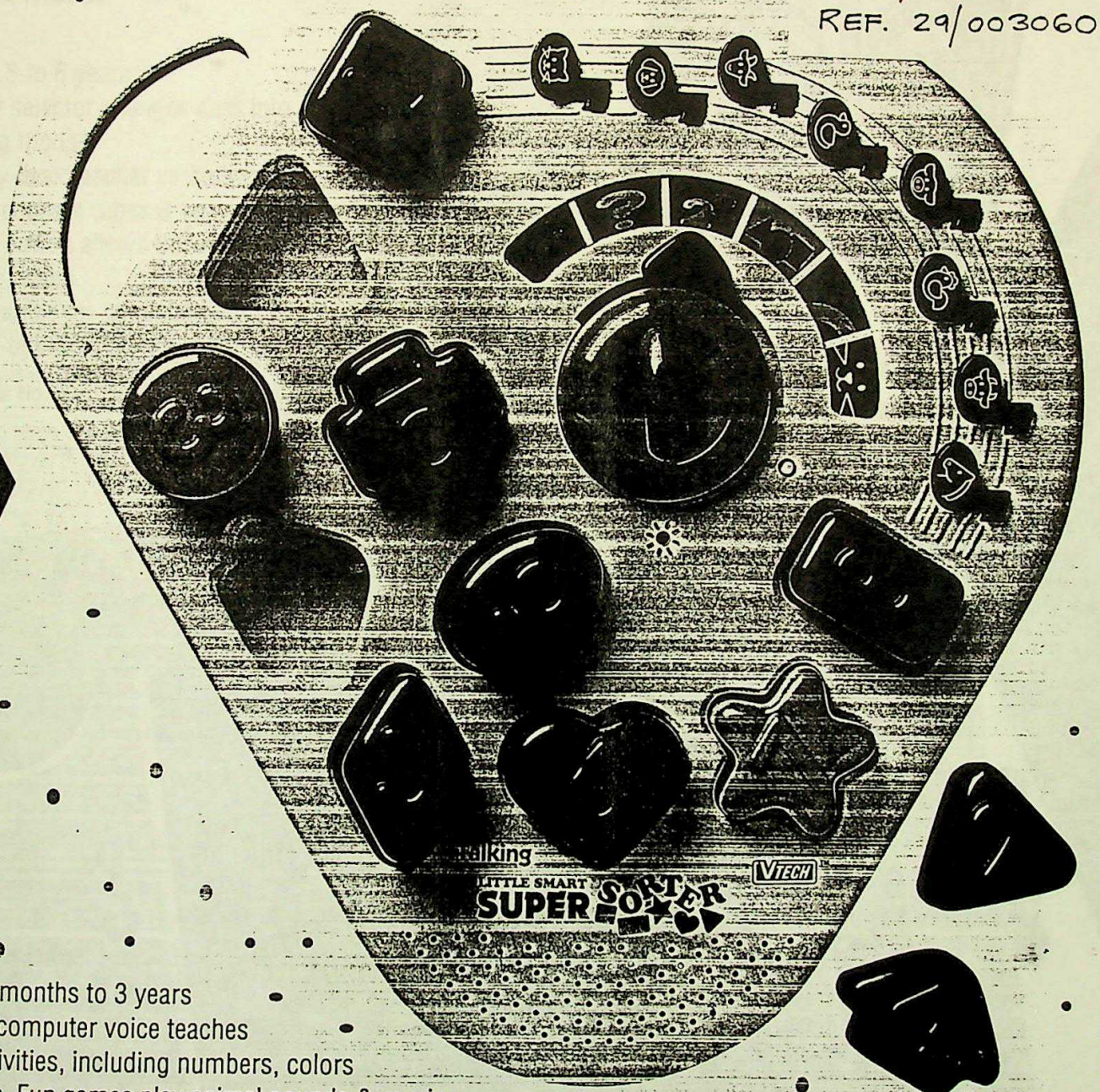
LITTLE SMART SUPER SORTER™

For all sorts of fun!

Deluxe talking activity sorter adds a new twist to matching colors, shapes, numbers & more!

VIDEO TECHNOLOGY INDUSTRIES INC.
1992
REF. 29/003060

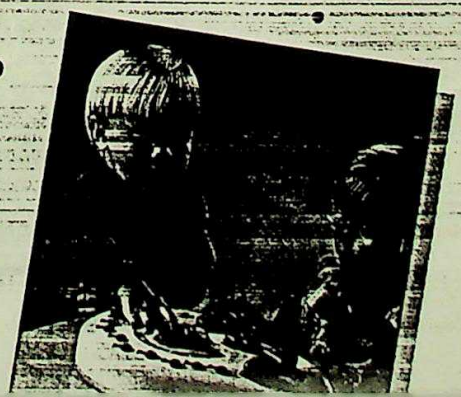
NEW!



Ages 12 months to 3 years

- Friendly computer voice teaches 6 fun activities, including numbers, colors & shapes. Fun games play animal sounds & music.
- Find It game teaches matching & memory skills.
- 10 colorful chunky shapes with numbers.
- 10 sing along nursery rhyme melodies.
- 8 fun animal sounds.
- Battery-operated (4 "AA" cells not included.)

TV/PRINT



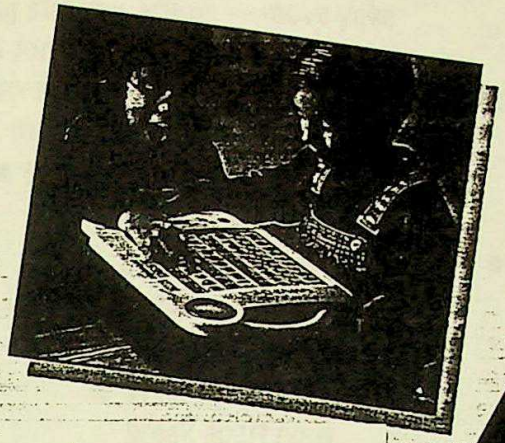
Stock No. 80-1469 Case Pack 6
Case Wt. 17 lbs.10 oz. Cube: 3.46

ELECTRONIC/TALKING

LITTLE SMART ALPHABET DESK™

Take-along alphabet fun!

Talking alphabet desk teaches letter identification, alphabetical order, basic spelling, beginning sounds, shapes, numbers, music, & more!



Ages 2.5 to 6 years

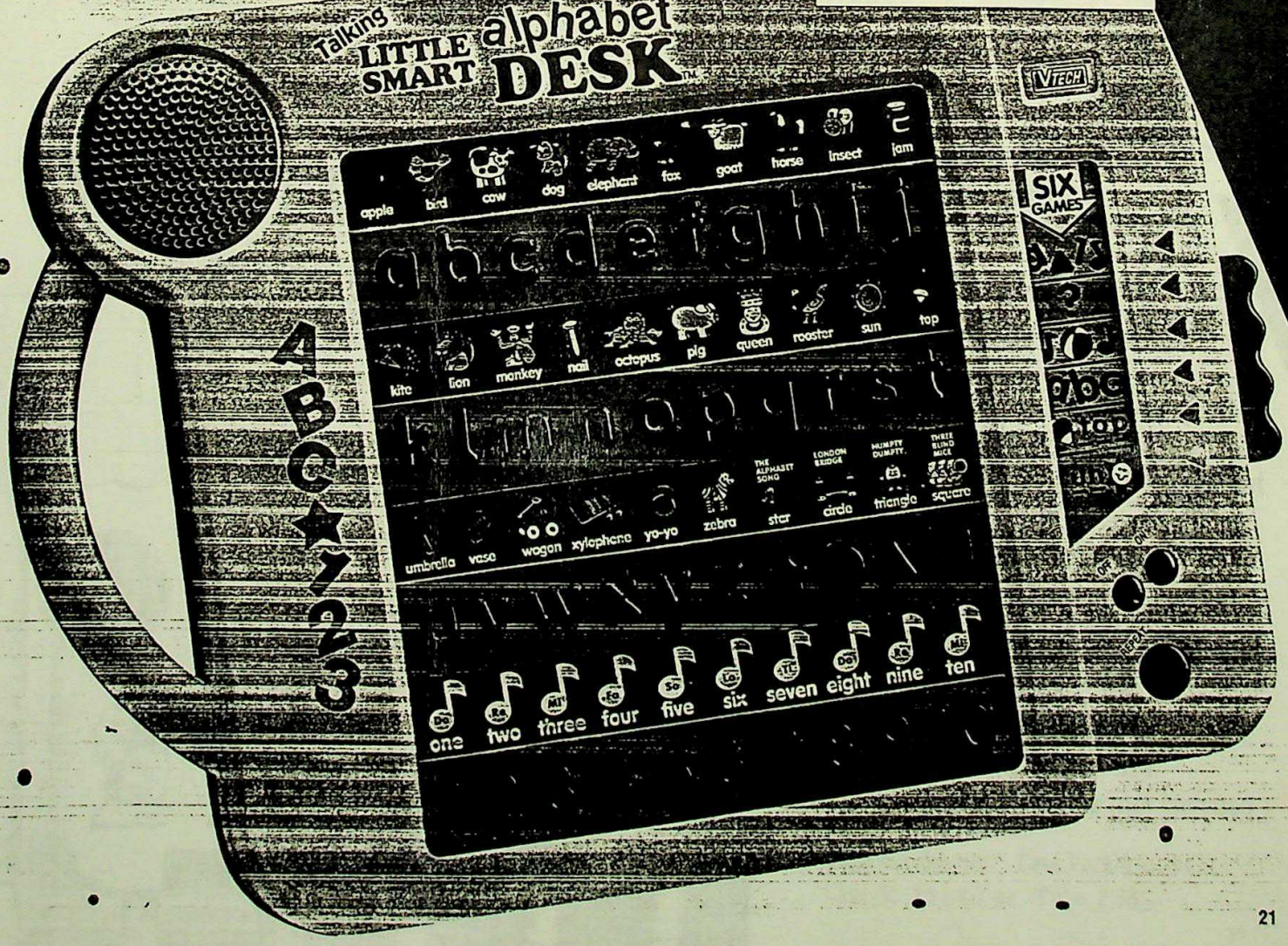
- Activity selector changes desk into six different learning modes.
- Friendly desk teacher verbally instructs each activity.
- Four preschool tunes & ten note keyboard
- Repeat button allows the question to be repeated.
- Carry handle for take-along fun.
- Battery-operated (4 "AA" cells not included.)

TV/PRINT

Stock No. 80-1470 Case Pack 6 Case Wt. 19 lbs.6 oz. Cube: 3.96

VIDEO TECHNOLOGY INDUSTRIES INC.
1992
REF. 29/003060

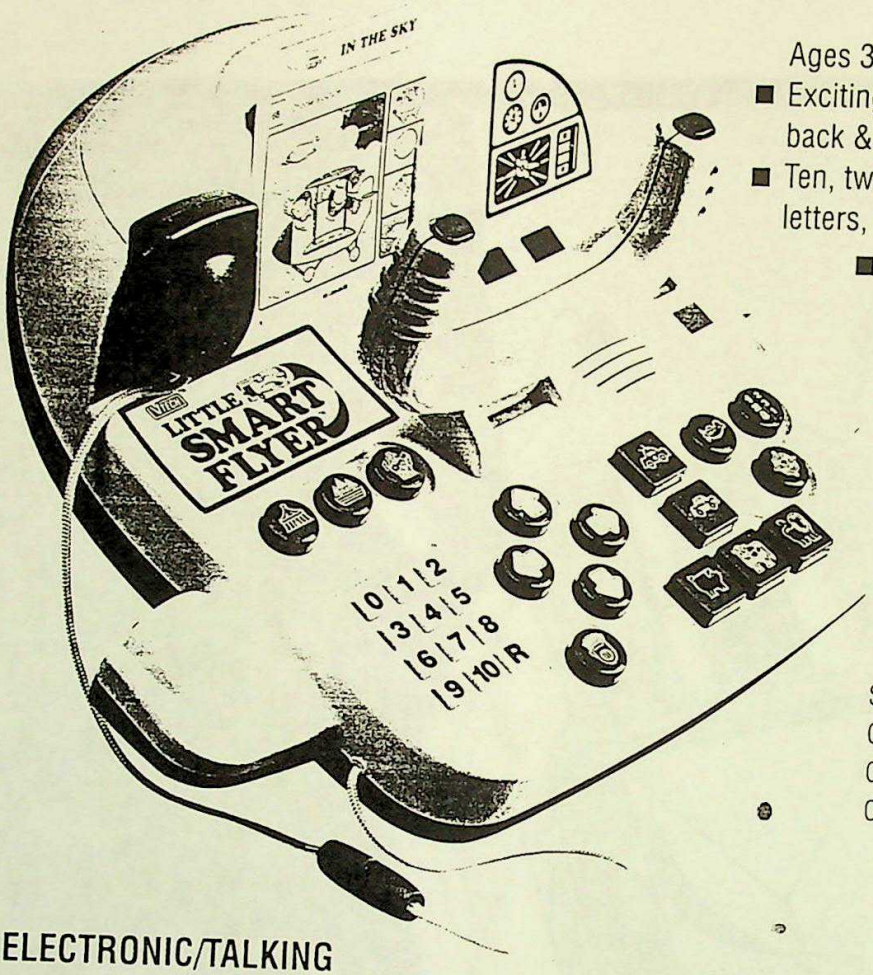
NEW!



ELECTRONIC/TALKING

LITTLE SMART FLYER™

Soar into a world of fun & learning with Little Smart Flyer!



Ages 3 and up

- Exciting steering action — move yoke back & forth to answer questions.
- Ten, two-sided interactive learning cards. Explore letters, numbers, shapes, music, & more!
- Built-in Traveling Tunes.
- Five airplane sound effects & animal sounds.
- Number match game.
- Mystery missing target game.
- Walkie-talkie with safety break apart cord.
- Battery-operated (4 "AA" cells not included.)

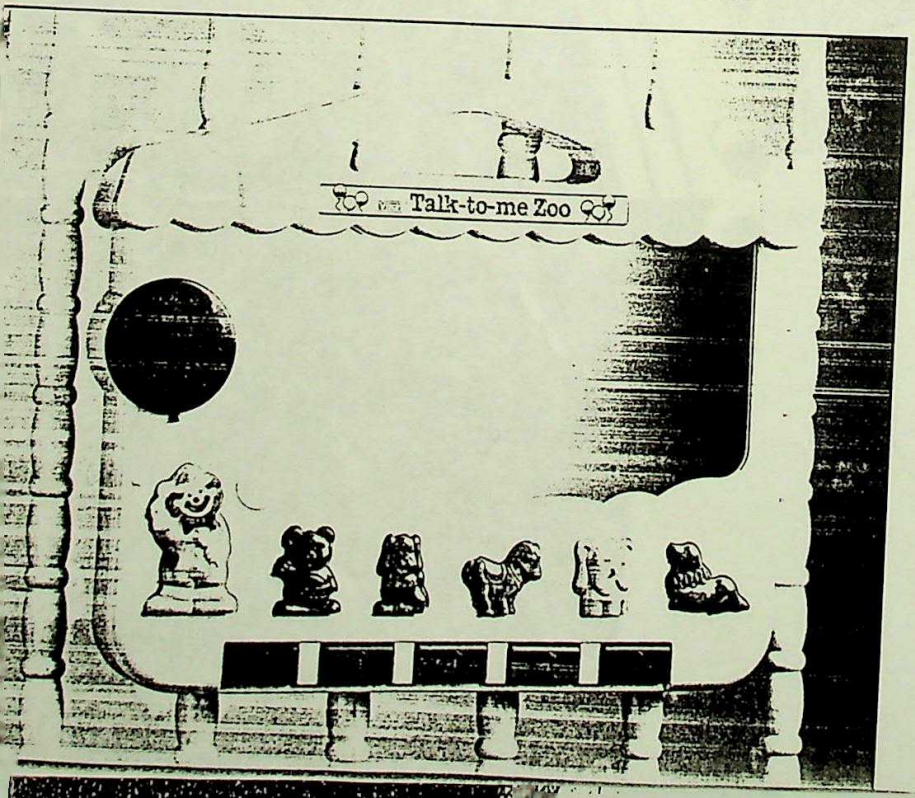
Stock No. 80-1298
Case Pack 4
Case Wt. 21 lbs.
Cube: 5.4

VIDEO TECHNOLOGY INDUSTRIES INC.
1992
REF. 29/003060

ELECTRONIC/TALKING

TALK TO ME ZOO™ MIRROR

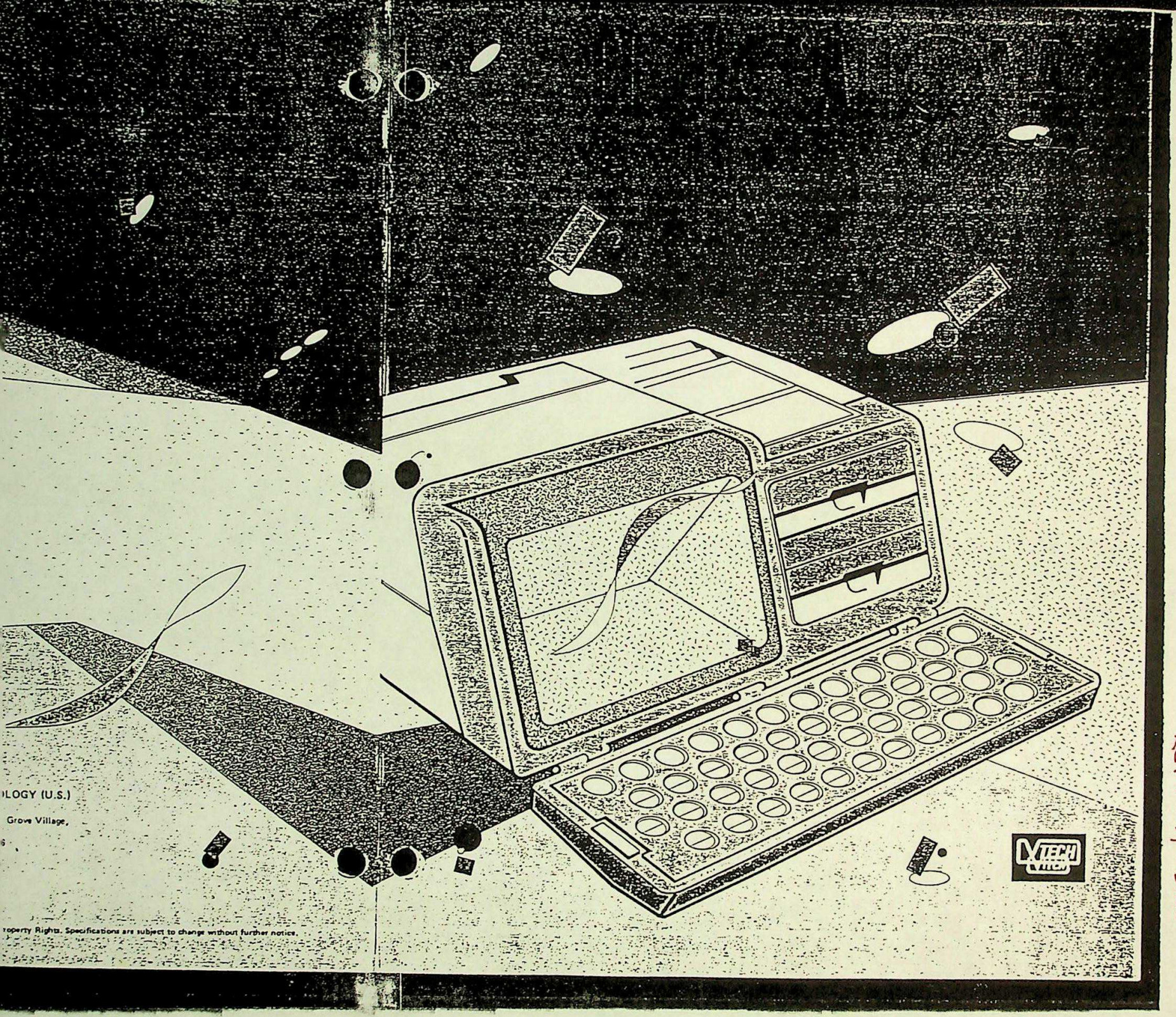
The talking, magical, musical mirror!



Ages birth to 2.5 years

- Talking clown plays "Peek-a-Boo" & "Find Me" game with baby.
- Friendly dog, elephant & horse "talk" when touched.
- Lullaby bear plays 3 songs as nightlight softly flashes.
- Talented circus seal says a merry-go-round rhyme.
- 5 colorful, musical notes.
- Features a sturdy crib or playpen grip, & tote-along handle.
- Scratch-resistant mirror
- Powers down when not in use.
- Requires 4 "AA" batteries (not included.)

Stock No. 80-1307 Case Pack 4
Case Wt. 15 lbs.7 oz. Cube: 2.38



Video Technology
1984
REF. 29/003860

VIDEO TECHNOLOGY 1989

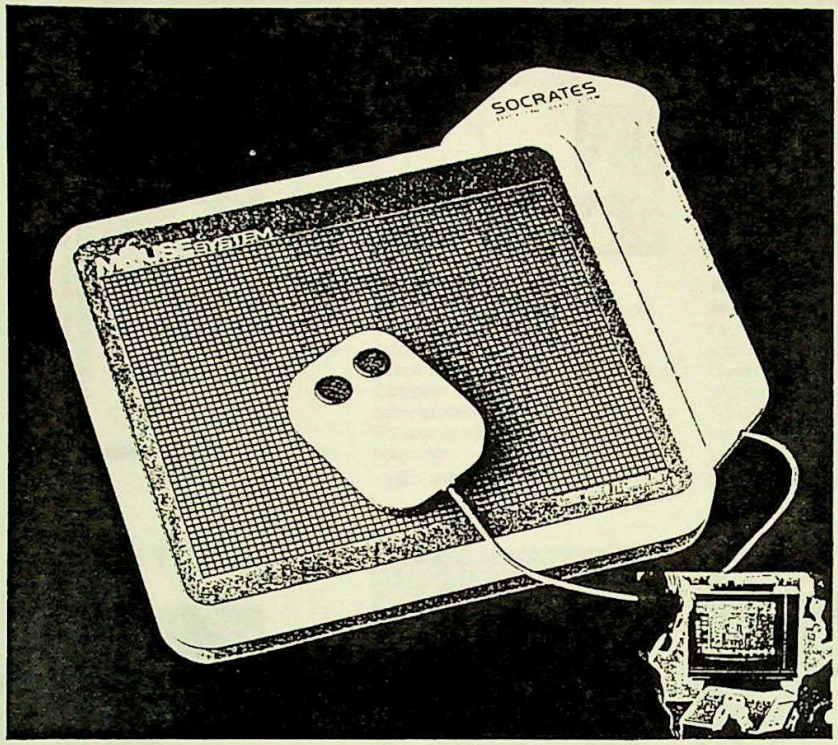
EDUCATIONAL ELECTRONICS

VIDEO TECHNOLOGY
RECEIVED JUL 3, 1989

Socrates inter-active educational video system turns any television into a learning and fun center for the entire family! Wireless remote controls allow children to play from a safe comfortable distance. Full color, large screen graphics enhance the 90 entertaining and educational program variations built into the main unit.

MOUSE SYSTEM™ and TOUCH PAD™

For use with Socrates Educational Video System.

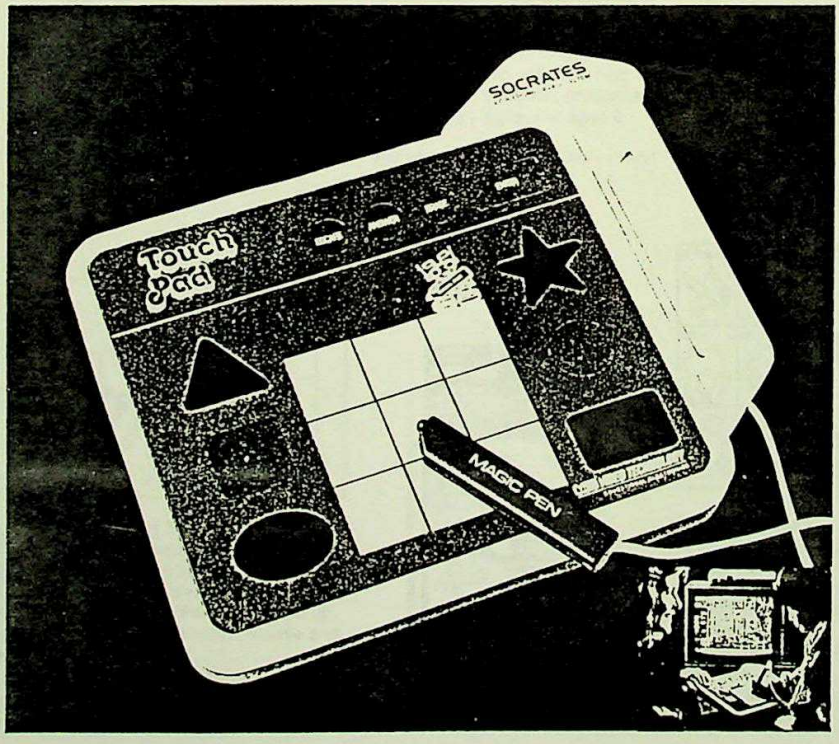


Mouse System™

Challenges the most creative artist

- Wireless remote controls for operation from a comfortable position.
- Easy to use system creates finer more accurate drawings.
- Introduction to Computer Aided Drawing system (CAD).
- Includes CAD Professor cartridge that teaches the basics of architectural, interior, fashion and textile design.
- Expandable with optional cartridges.
- What is drawn on the tablet appears on the screen. 9" × 7¾" drawing tablet.
- Battery operated (4 "AA" cells) not included.
- For ages 7 and up.

Stock No. 80-0998
Case Pack 6
Case Wt. 22 lbs.
Cube 1.7



Touch Pad™

Helps pre-schooler's learn using the magic of Socrates

- Large easy-to-use touch sensitive drawing area.
- Includes cartridge that helps children learn to form and recognize numbers, letters and shapes.
- Socrates takes children step-by-step through each activity.
- Expandable with optional cartridges
- Battery operated (4 "AA" cells) not included.
- For ages 3 and up.

Stock No. 80-0997
Case Pack 6
Case Wt. 22 lbs.
Cube 1.7

AWAREN

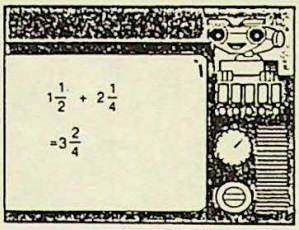
BRAIN TI

Puzzling F
They aren't wh
Four activities
thinking, help
memory skills.
For use with S
Voice cartridge
Stock #80-10

SOCRATES EXPANSION CARTRIDGES

Three exciting categories expand Socrates Educational Video System

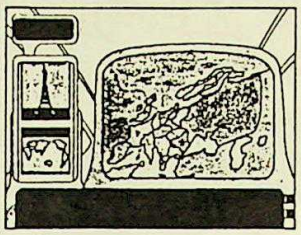
AWARENESS



Facts 'n Fractions

An introduction to fractions, mixed numerals and decimals.
Tutorial and practice modes;
Teach step-by-step problem solving.
Competition: 2-Players compete to solve problems. For ages 8 and up.
For use with Socrates and Voice cartridge.

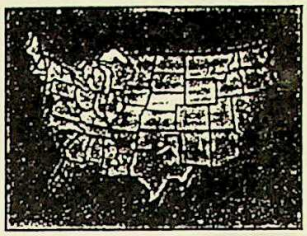
Stock #80-0992



Around the World

An adventure in world geography.
Four modes of play introduce children to facts about continents, countries, states, landmarks and more!
For ages 7 and up.
For use with Socrates, Mouse and Voice cartridge.

Stock #80-1054

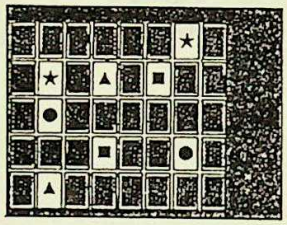


State to State

A journey across the United States.
Six activities quiz children on facts about states, capitals, spelling and location. For ages 8 and up.
For use with Socrates, Mouse and Voice cartridge.

Stock #80-1085

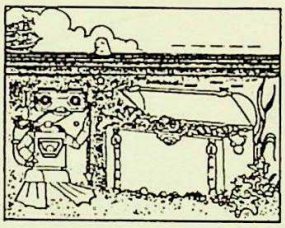
BRAIN TEASERS



Memory Mania

Memory games that challenge!
Five entertaining activities help develop concentration, recognition and memory skills. For ages 6 and up.
For use with Socrates, Mouse and Voice cartridge.

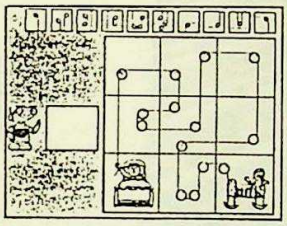
Stock #80-1075



Word Wizard

Word games to boggle the mind.
Five word games teach spelling, definitions, opposites and problem solving. For ages 8 and up.
For use with Socrates, Mouse and Voice cartridge.

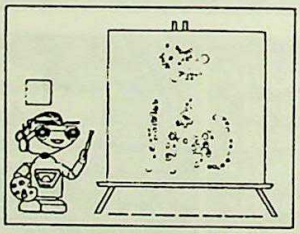
Stock #80-1076



Amazing Mazes

Find your way through some of the zaniest mazes.
Four different maze activities help develop problem solving skills and logical thinking. For ages 5 and up.
For use with Socrates, Mouse and Voice cartridge.

Stock #80-1077

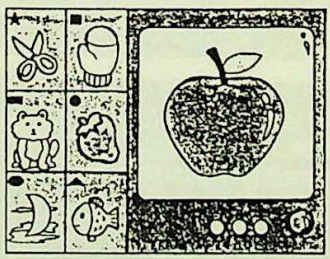


Puzzling Pictures

They aren't what they appear to be!
Four activities stimulate creative thinking, help develop spelling and memory skills. For ages 6 and up.
For use with Socrates, Mouse and Voice cartridge.

Stock #80-1084

PRE-SCHOOL



I.Q. Builder

Activities to give your pre-schooler a head start!
Four activities teach sounds, shapes, time and relationships.
For ages 3 to 9.
For use with Touch Pad and Voice cartridge.

Stock #80-0999

Case Pack 36 master/6 inner
Case Wt. 13 lbs.
Cube 1.8

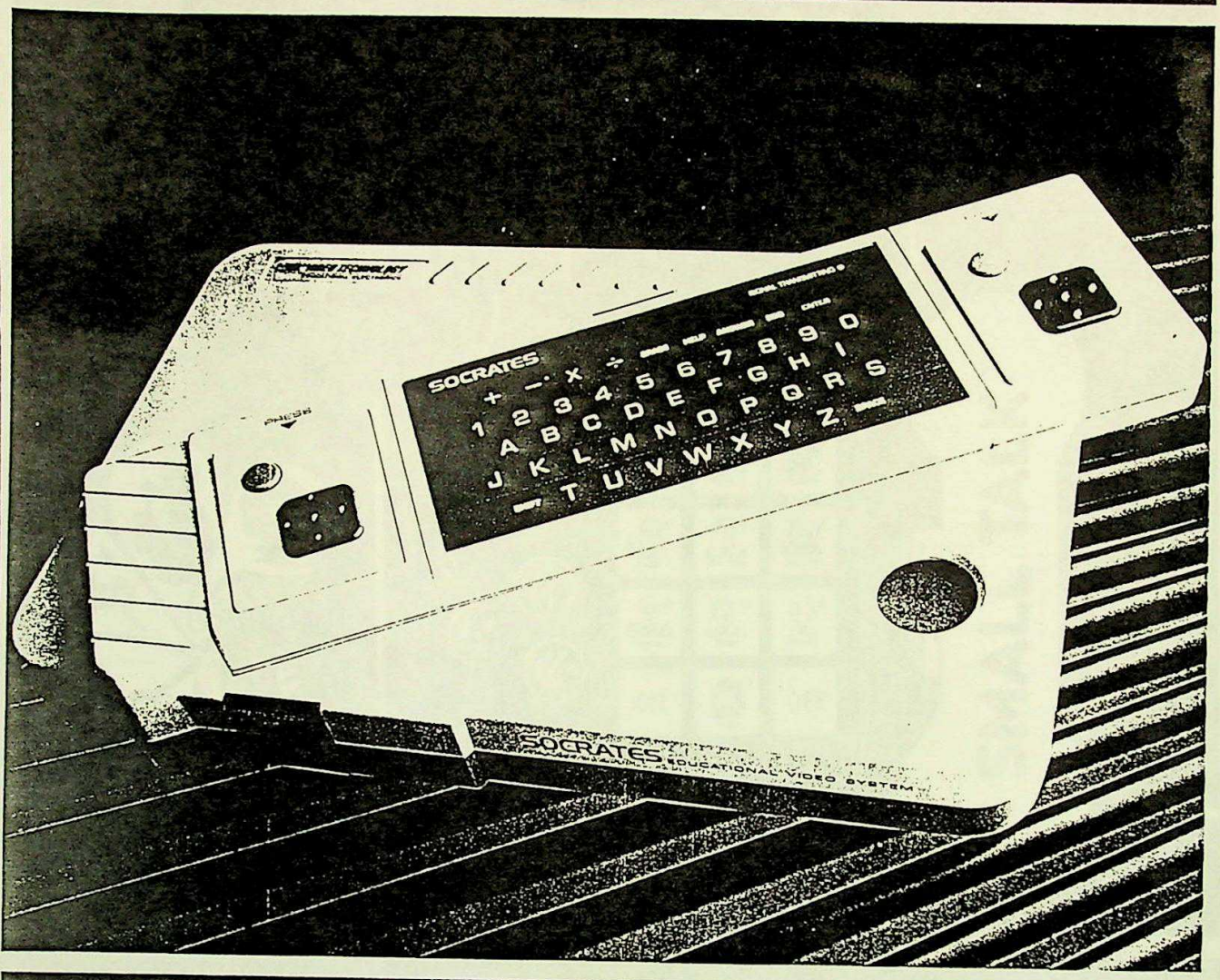
NATIONALLY ADVERTISED

AS SEEN ON TV!

SOCRATES™

Educational Video System

Turns your TV into a one-to-one learning and fun center.

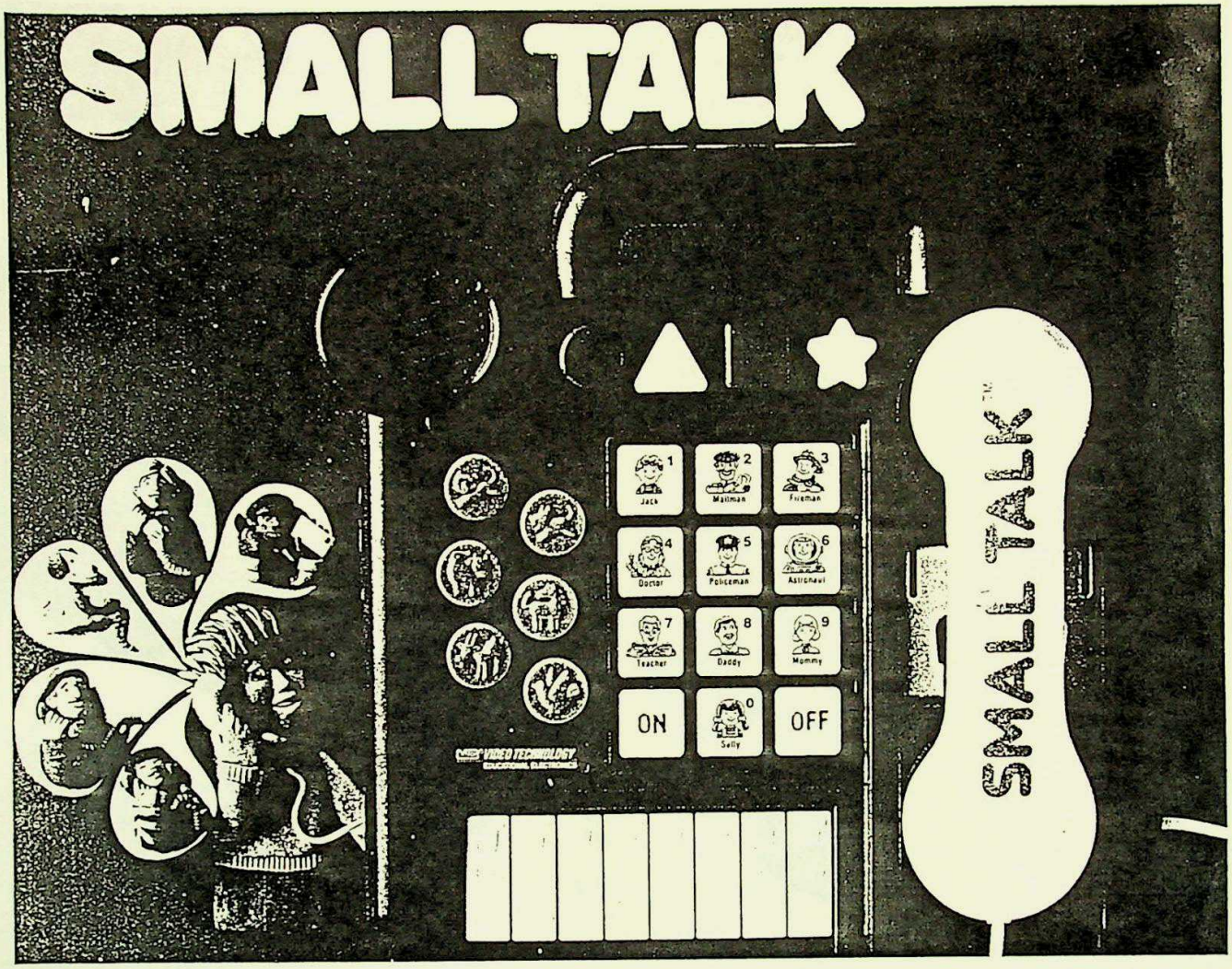


Voice Cartridge
Stock No. 80-0991
Case Pack 24 master/ 6 inner
Case Wt. 19 lbs. 8 oz.
Cube 1.8

- Hooks up directly into the TV set. No other equipment is required.
- Wireless remote controls.
- Uses the entire TV screen.
- Full color animated graphics.
- Over 90 built-in educational activities include:
  (1) Six levels of math activities, addition, subtraction, multiplication, division, math quiz and math practice mode;
  (2) Word problems—Five levels of spelling and grammar activities;
  (3) Musical Games—Four different musical activities teach note recognition;
  (4) Fun word games to play: Word Zapper, Word Scramble and Word Search;
  (5) Super Painter mode to challenge creative play, full color capabilities, picture memory, and drawing commands;
- Expandable.
- Battery operated (6 "D" cells and 4 "AA" cells) or 12V AC adaptor. Not included.
- For ages 5 and up.

Stock No. 80-0943
Case Pack 4
Case Wt. 20 lbs.
Cube 3.1

SMALL TALK™



Electronic, interactive activity center with six built-in activities:
Talking Phone · Numbers
Shapes · Colors
Animal Sounds · Music

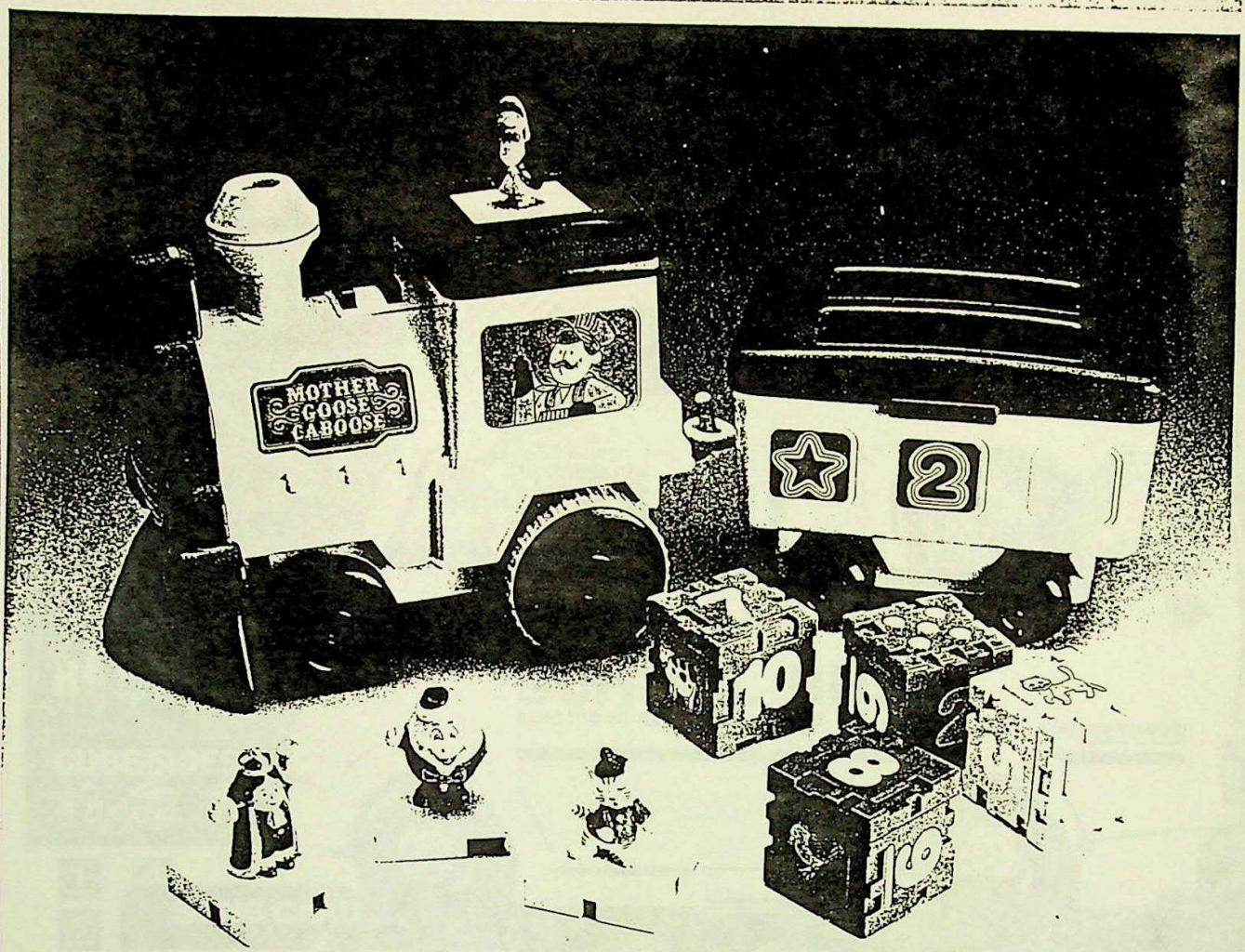
- Tote handle makes it easy to take anywhere
- Free-playing keyboard encourages musical interaction
- Phone features safety break-apart cord
- Battery operated (4 "C" cells) not included
- For ages 2½ and up

Stock No. 80-0981
Case Pack 6
Case Wt. 19 lbs.
Cube 2.6

NEW FOR 1989

Talking MOTHER GOOSE CABOOSE™

Electronic learning trip [illegible]

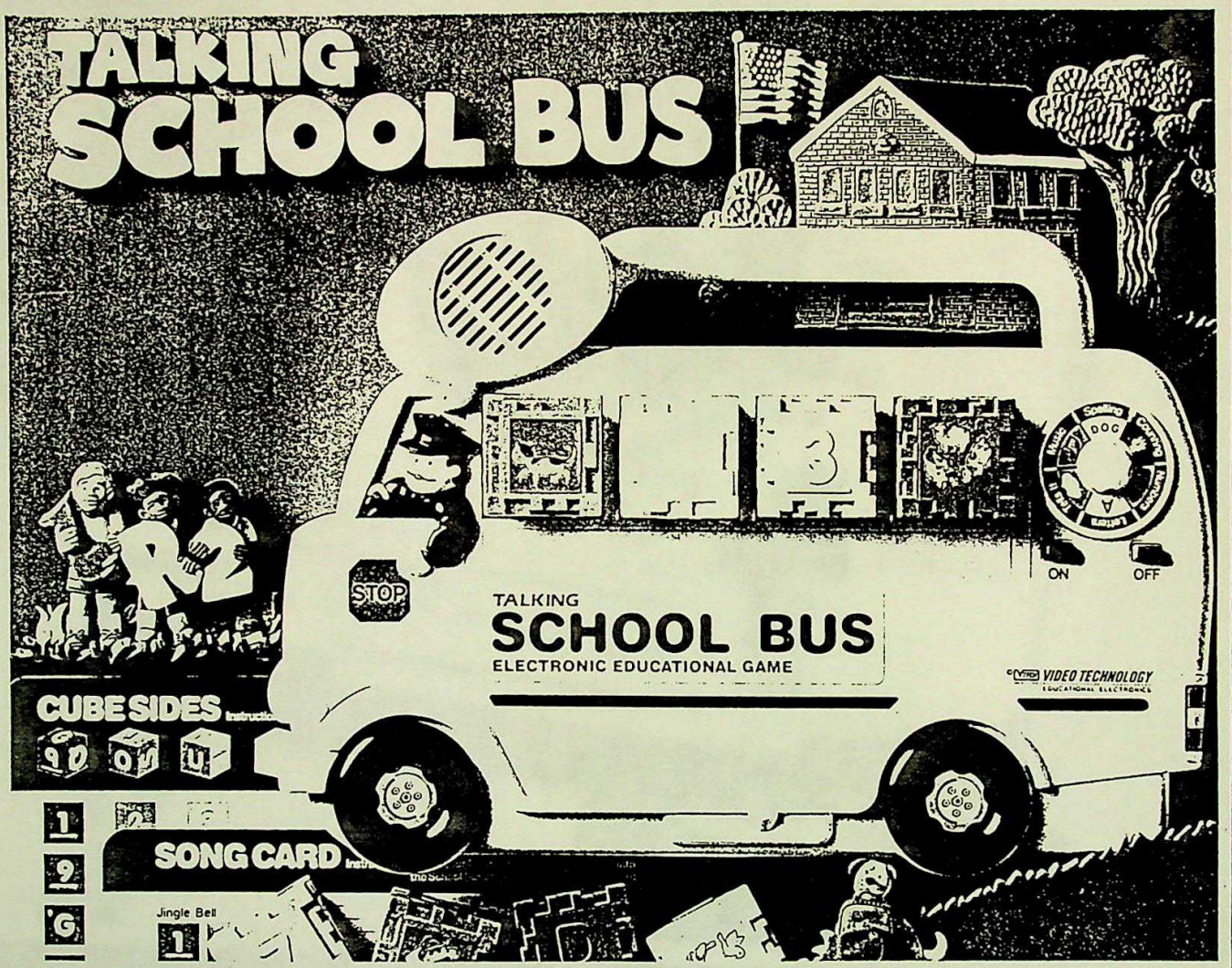


Stock No. 80-1073
Case Pack 6
Case Wt. 12 lbs.
Cube 3.4

- Includes four, three-dimensional mother goose characters. Child inserts a character into engine to hear one of four pre-programmed nursery rhymes.
- Four additional computer blocks makes learning colors, numbers and shapes fun and challenging.
- Friendly Conductor talks children through each activity.
- Push Mother Goose Caboose along and hear choo-choo and whistle sounds. Flashing headlight shows the way. Blocks store in the caboose car.
- Battery operated (4 "AA" cells) not included.
- For ages 2½ and up.

Smart Toys . . . Smart Kids

Talking SCHOOL BUS™



- Eight computer blocks make learning numbers, letters, matching, counting, spelling and music fun!
- Friendly clear voice helps pre-schooler learn step-by-step.
- Two helper cards included.
- Built-in storage and tote-along handle make it easy to take anywhere.
- Automatic shut-off when not in use.
- Battery operated (6 "AA" cells) not included.
- For ages 2½ and up.

Stock No. 80-0950
Case Pack 6
Case Wt. 23 lbs. 5 oz.
Cube 3.6

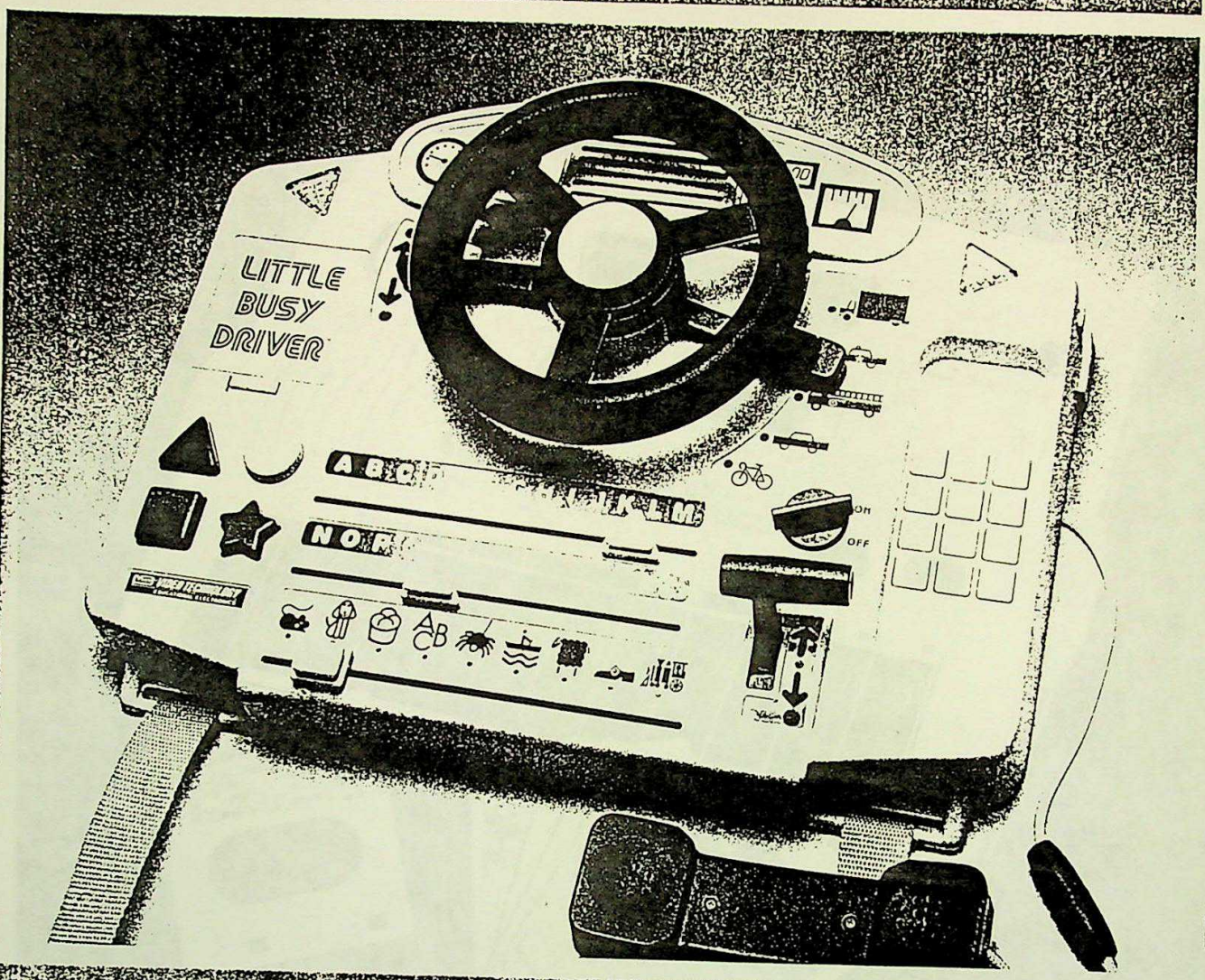
Smart Toys... Smart Kids™

NATIONALLY ADVERTISED

NEW FOR 1989

Talking LITTLE BUSY DRIVER

The electronic activity toy that teaches too!



Stock No. 80-1088
Case Pack 4
Case Wt. 11 lbs.
Cube 2/2

Educational activity center with 6 built-in activities:
Shapes · Alphabet
Colors · Music
Numbers · Horn Sounds

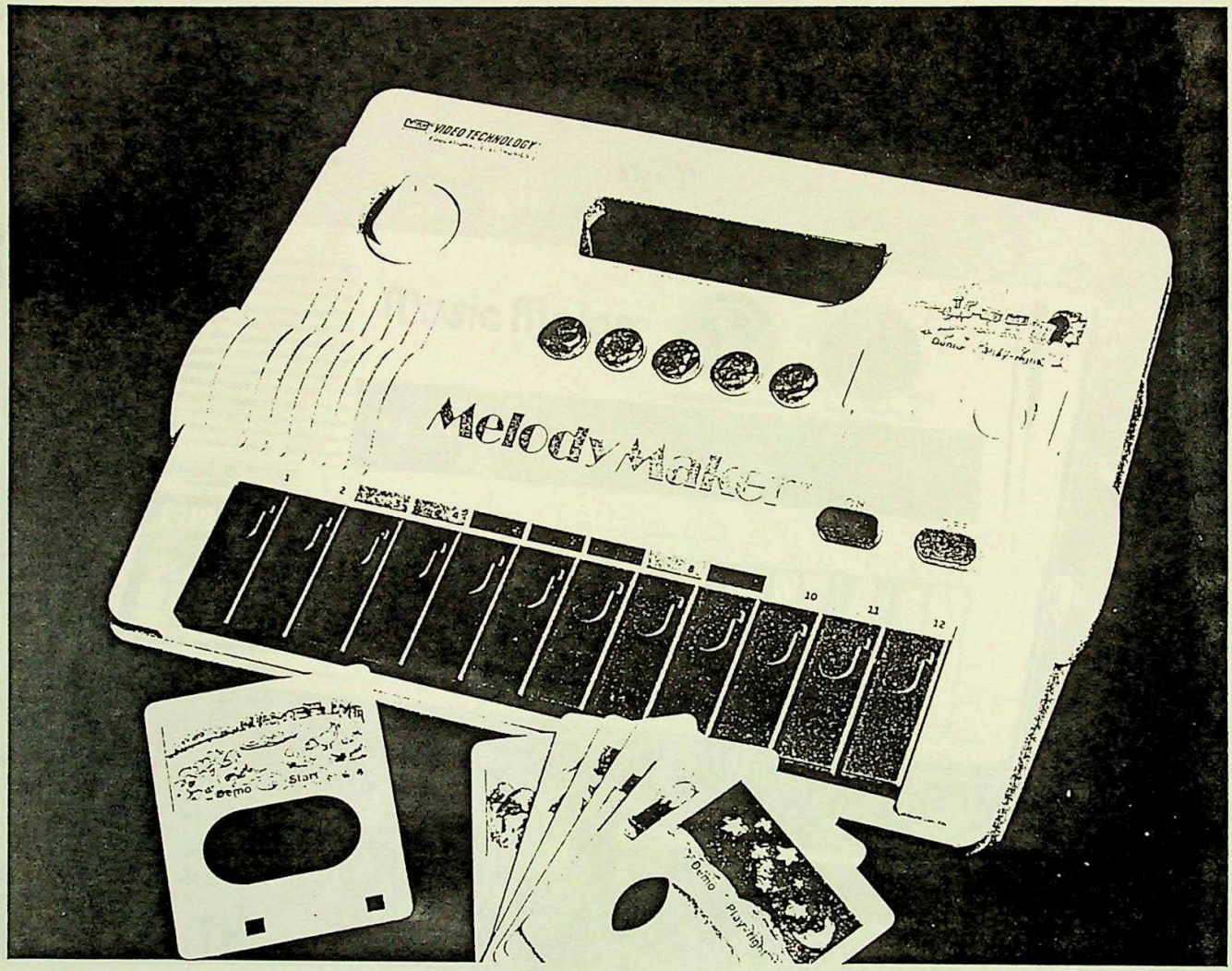
- Child can choose from eight pre-programmed songs on the car radio.
- Five horns and sirens add to the fun.
- Car phone complete with safety break-away cord.
- Velcro straps make the unit easy to attach to strollers, high chairs and car seats.
- Battery operated (4 "AA" cells) not included.
- For ages 2½ and up.

Smart Toys . . . Smart Kids

NEW FOR 1989

MELODY MAKER™

NATIONALLY ADVERTISED



- Comes complete with eight program discs.
- Six of the discs allow children to play one of 12 pre-programmed songs in any of five special sound effects (piano, cat, dog, goat, cow). Songs can be played in Demo mode or Play-Right mode, by pressing one key at a time.
- The Memory Disc allows pre-schooler to compose a song up to 32 notes in either single tones or chords.
- The Game Disc allows pre-schooler to Match-the-Song of Old MacDonald or play a "Simon" type game of Follow-Me.
- Colorful songbook included.
- Battery operated (4 "AA" cells) not included.
- For ages 2 and up.

Stock No. 80-1072
Case Pack 6
Case Wt. 12 lbs.
Cube 2.1

Smart Toys...Smart Kids™

NATIONALLY ADVERTISED

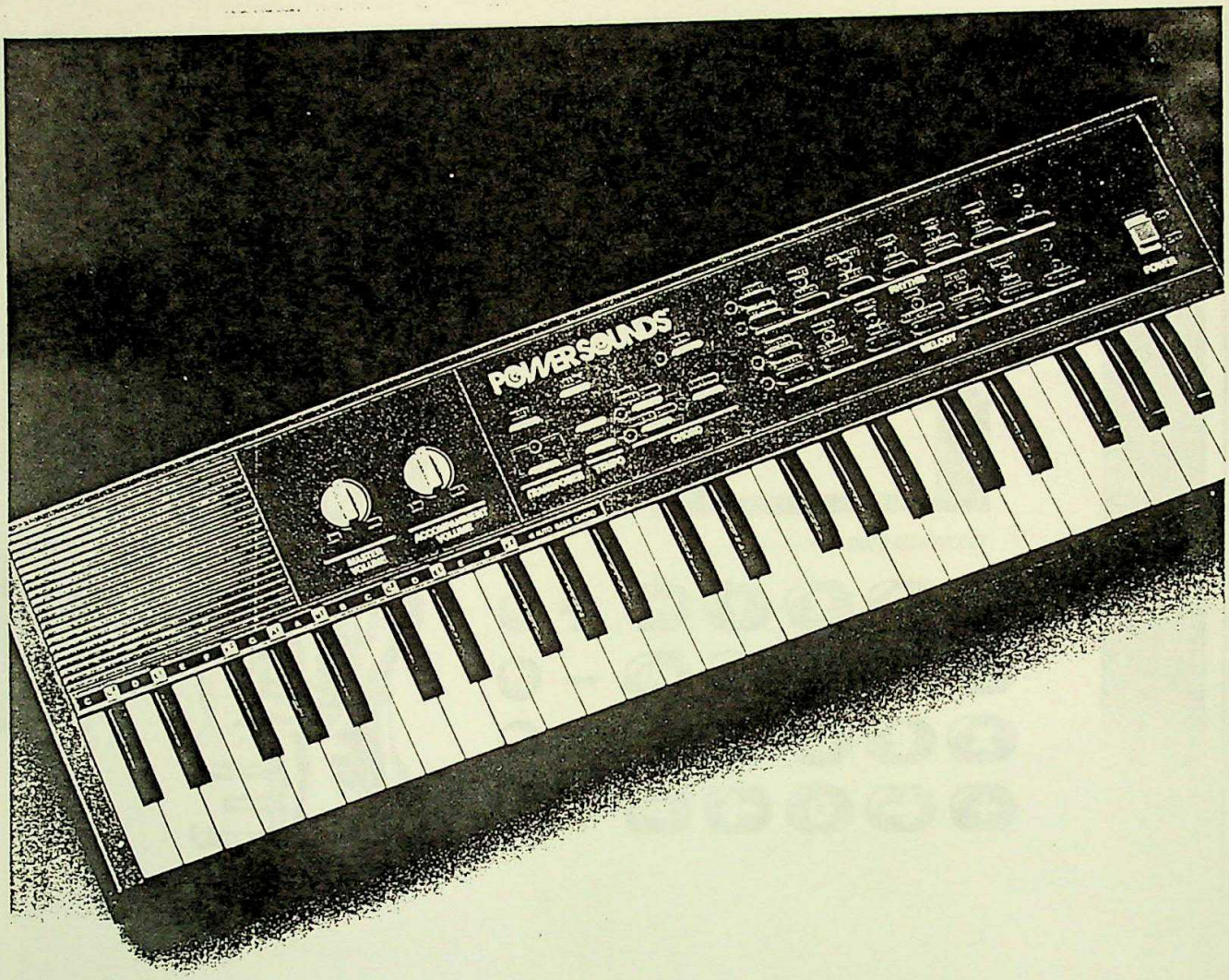
Talking MUSIC MAJOR™

Stock No. 80-0899
Case Pack 6
Case Wt. 25 lbs.
Cube 2.9

- Portable electronic keyboard.
- Instrument sounds include: piano, violin, trumpet, organ, flute and 4 different drum sounds. It even includes the sound of a human voice.
- Six special effect animal sounds add to the fun!
- 12 built-in rhythms accompany the melody.
- Educational music games show musical notes on LED music staff.
- Includes hand held microphone for sing-along fun.
- Battery operated (6 "C" cells) or 9V AC adaptor. Not included.
- For ages 5 and up.

NEW FOR 1989

POWER SOUNDS KEYBOARD™

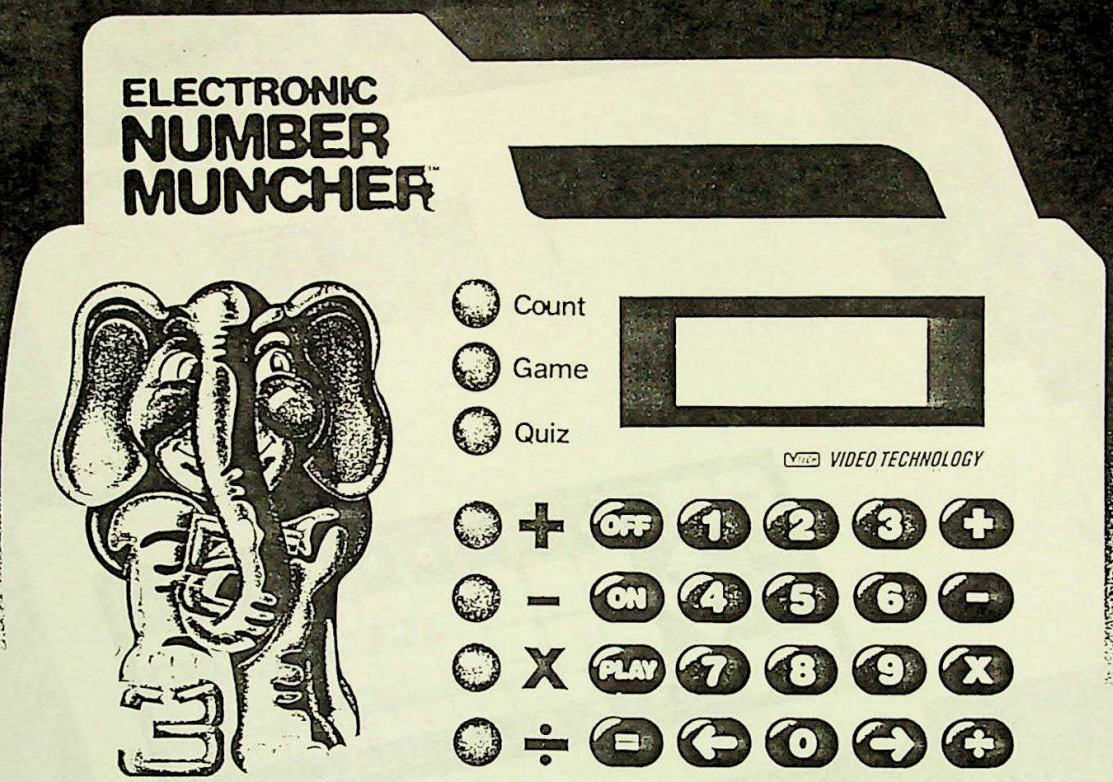


- 49 mid-sized keys. Four full octaves.
- 10 pre-set rhythms built-in.
- 10 popular instrument sounds built-in.
- Head phone jack and built in speaker.
- Step-by-step instruction manual includes songs to help the musician get started.
- Battery operated (6 "C" cells) or 12V AC adaptor. Not included.
- For ages 7 and up.

Stock No. 80-1094
Case Pack 6
Case Wt. 30 lbs.
Cube 3.4

NEW FOR 1989

Electronic NUMBER MUNCHER™



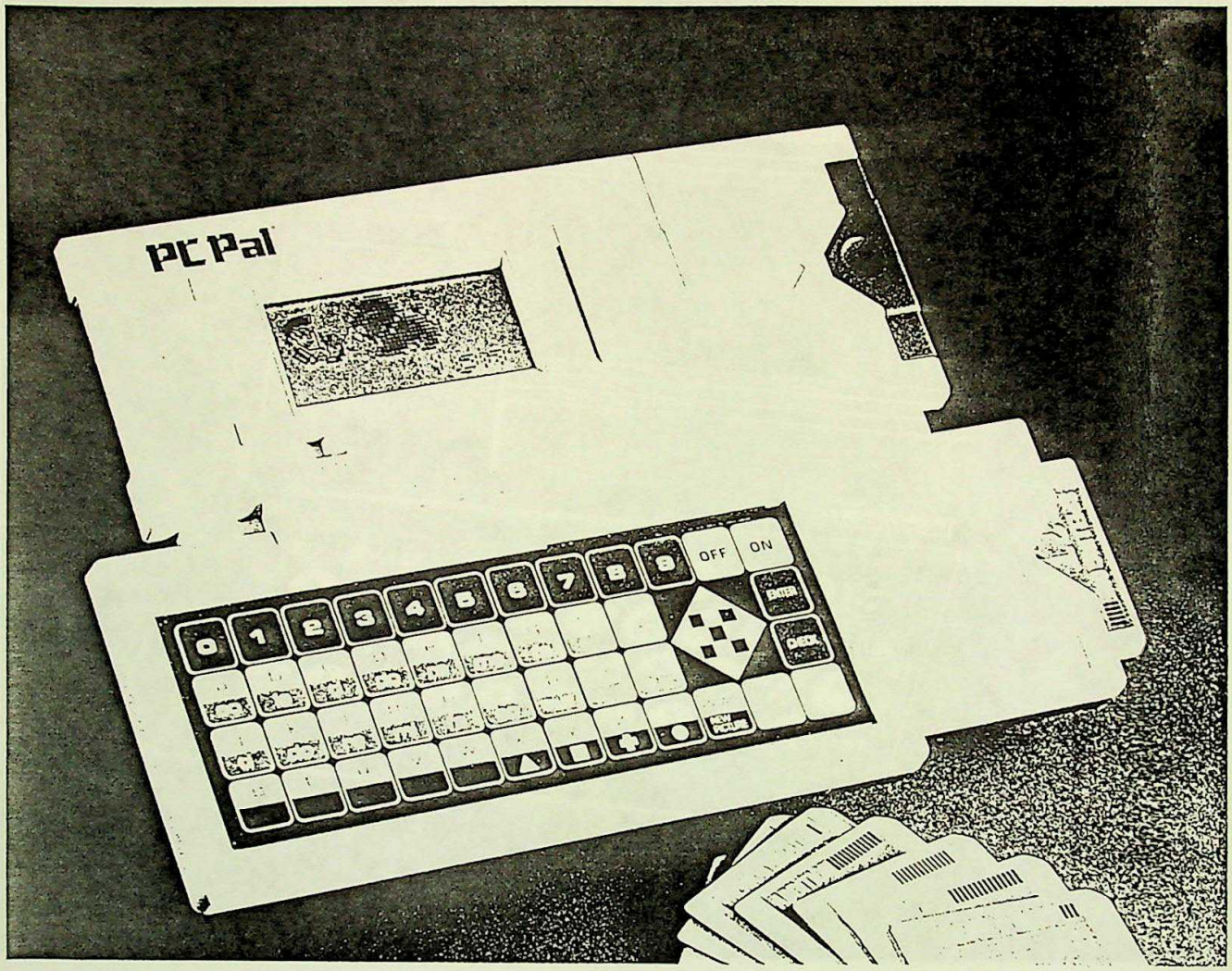
Stock No. 80-1102
Case Pack 12 master/6 inner
Case Wt. 26 lbs. 5 oz.
Cube 1.9

- Seven activities: addition, subtraction, multiplication, division, math quiz, counting and fun LCD game.
- Works as a basic calculator.
- Large LCD display and oversized keys.
- Built-in handle for portability.
- Battery operated (2 "AA" cells) not included.
- For ages 4 to 7.

NEW FOR 1989

PC PAL™

NATIONALLY ADVERTISED



- Comes with 9 "floppy discs" containing 18 challenging activities. Basic addition and subtraction, spelling, music, puzzles, animated Fun Art and much more!
- Large dot matrix display features bold clear graphics and animation. PC PAL's dot matrix friend takes children through each activity.
- Expandable with additional "floppy" discs and program cartridges.
- Storage compartment for "floppy discs" on back panel.
- Battery operated (4 "C" cells) or 9V AC adaptor. Not included.
- For ages 4 to 7.

Stock No. 80-1071
Case Pack 6
Case Wt. 16 lbs. 7 oz.
Cube 1.7

Additional Program Packs

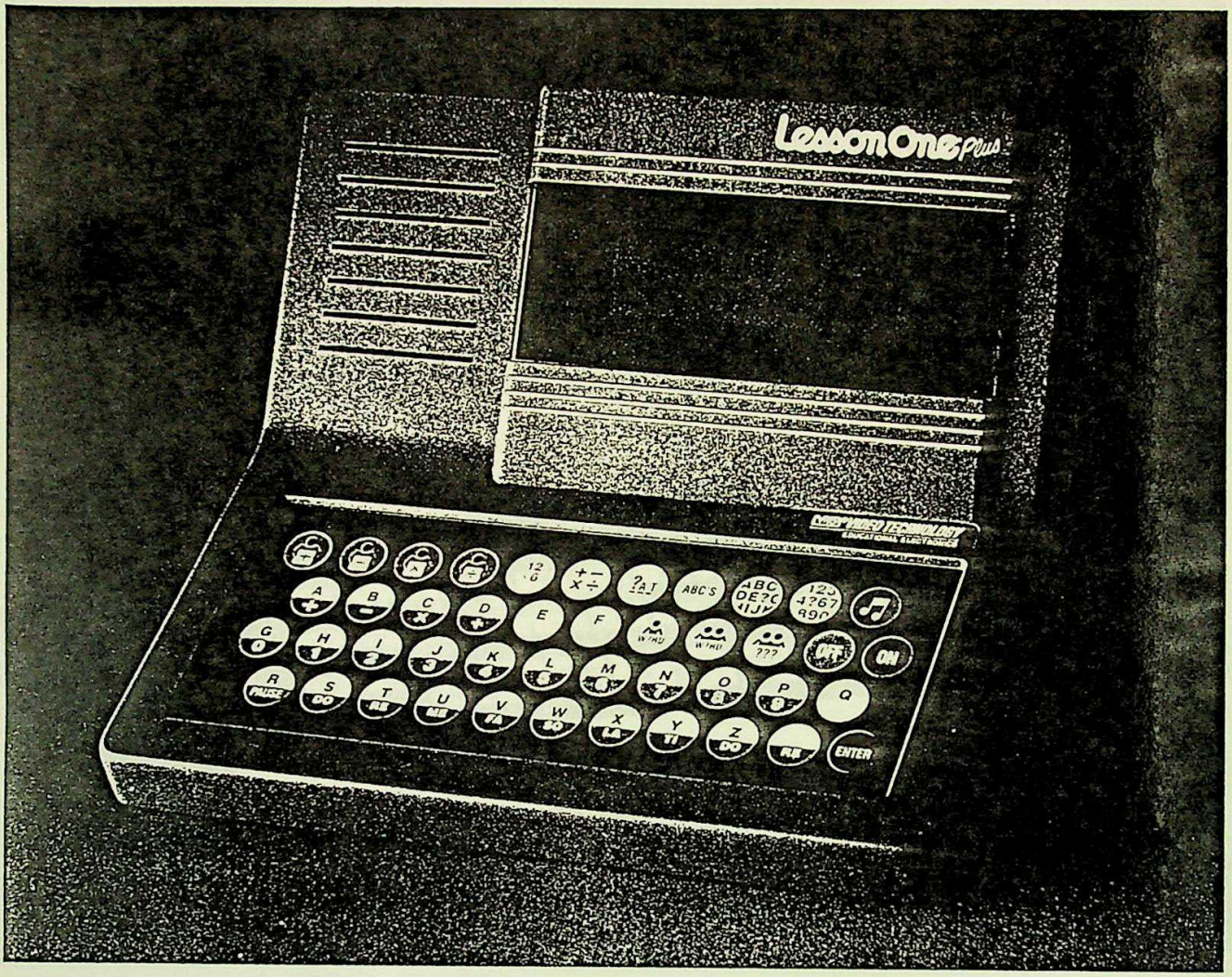
Stock No. 80-1092 Math Challenge
Stock No. 80-1104 Junior Word Games
Stock No. 80-1105 Advance Word Games
Stock No. 80-1106 Memory Fun
Stock No. 80-1107 Assorted Cartridges

Case Pack 40 master/10 inner
Case Wt. 21 lbs. 6 oz.
Cube 21

NATIONALLY ADVERTISED

NEW FOR 1989

LESSON ONE PLUS™

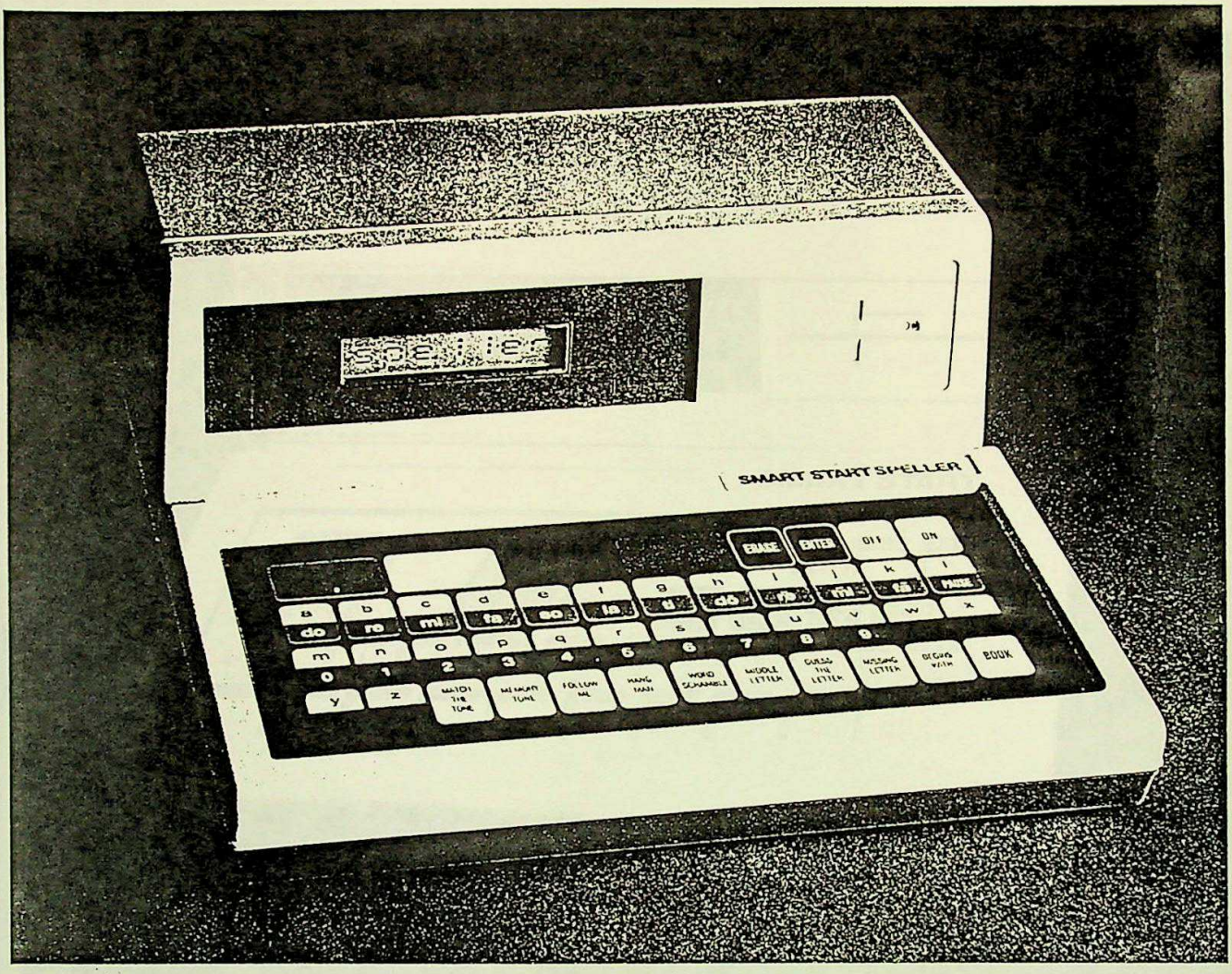


Stock No. 80-1079
Case Pack 6
Case Wt. 18 lbs.
Cube 1.5

- 14 built-in activities teach deduction, math, music, reading, spelling and more!
- New two player activites increase fun and challenge.
- Self-contained... nothing else to buy.
- Updated styling features bright LED display.
- Battery operated (6 "C" cells) or 9V AC adaptor. Not included.
- For ages 5 and up.

NEW FOR 1989

SMART START SPELLER™



- Seven challenging spelling activities built-in.
- Three programs in music fun and recognition.
- Colorful workbook includes pictures for spelling.
- Expandable with 6 new, age graded matchbooks focusing on basic math and logic problems, or the original 12 matchbooks from Smart Start.
- 150 word vocabulary built-in.
- Battery operated (4 "C" cells) or 9V AC adaptor. Not included.
- For ages 5 and up.

Stock No. 80-1070
Case Pack 10
Case Wt. 20 lbs. 9 oz.
Cube 3.9

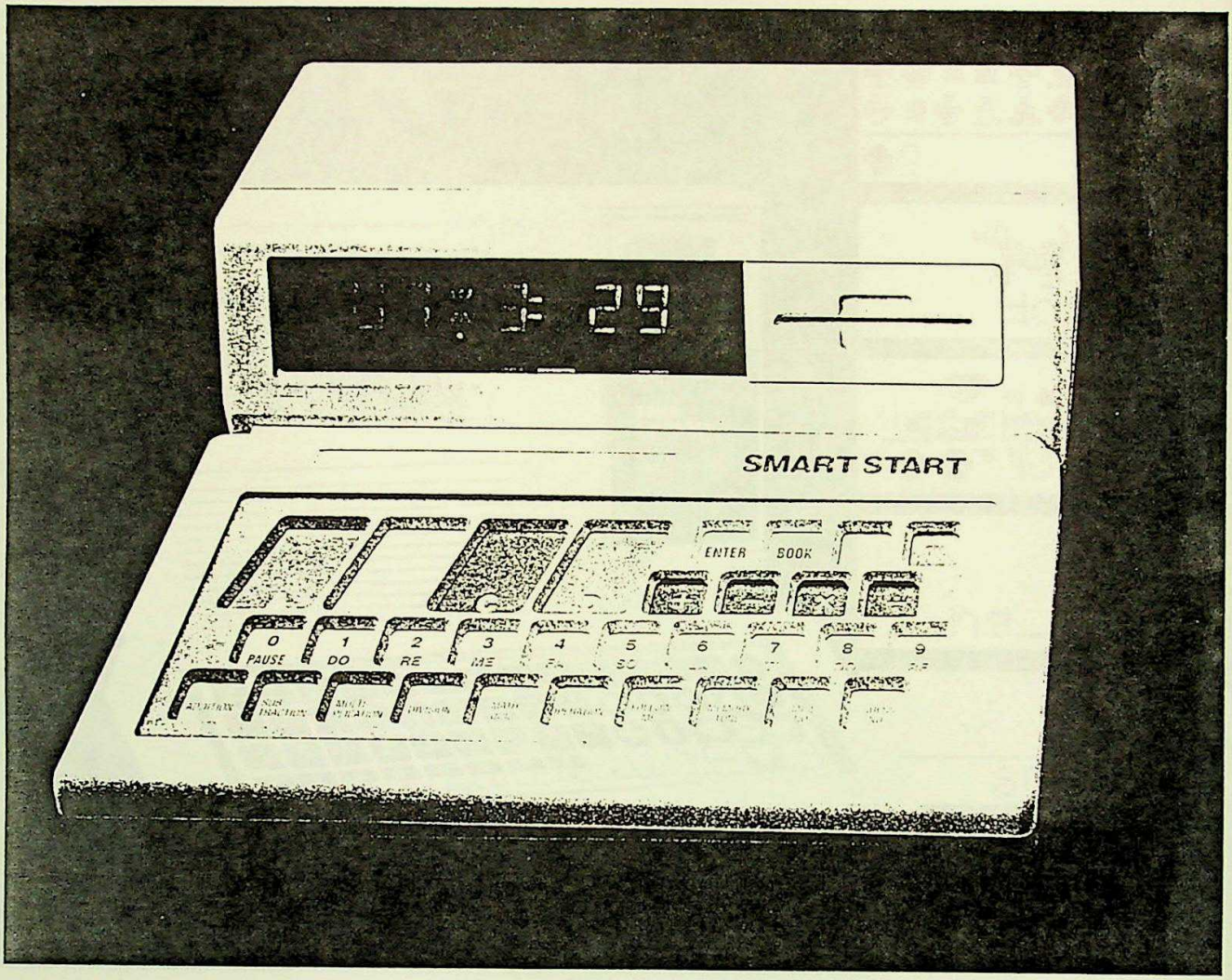
Additional MATCHBOOKS
six NEW books designed for use with Smart Start Speller™ and Smart Start™.

Stock No. 80-1098 Age 6
Stock No. 80-1099 Age 7
Stock No. 80-1100 Age 8
Stock No. 80-1108 Assorted Matchbooks

Case Pack 48 master/24 inner
Case Wt. 46 lbs.
Cube 2.5 master

NATIONALLY ADVERTISED

SMART START™



Additional MATCHBOOKS

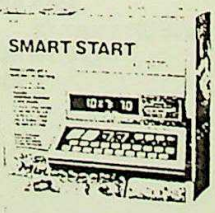
for use with Smart Start and Smart Start Speller

Stock No. 80-0955 Age 5-A
Stock No. 80-0956 Age 6-A
Stock No. 80-0957 Age 6-B
Stock No. 80-0958 Age 7-A
Stock No. 80-0959 Age 7-B
Stock No. 80-0960 Age 8-A
Stock No. 80-0961 Assorted Matchbooks

Case Pack 48 master/24 inner
Case Wt. 46 lbs.
Cube 2.5 master

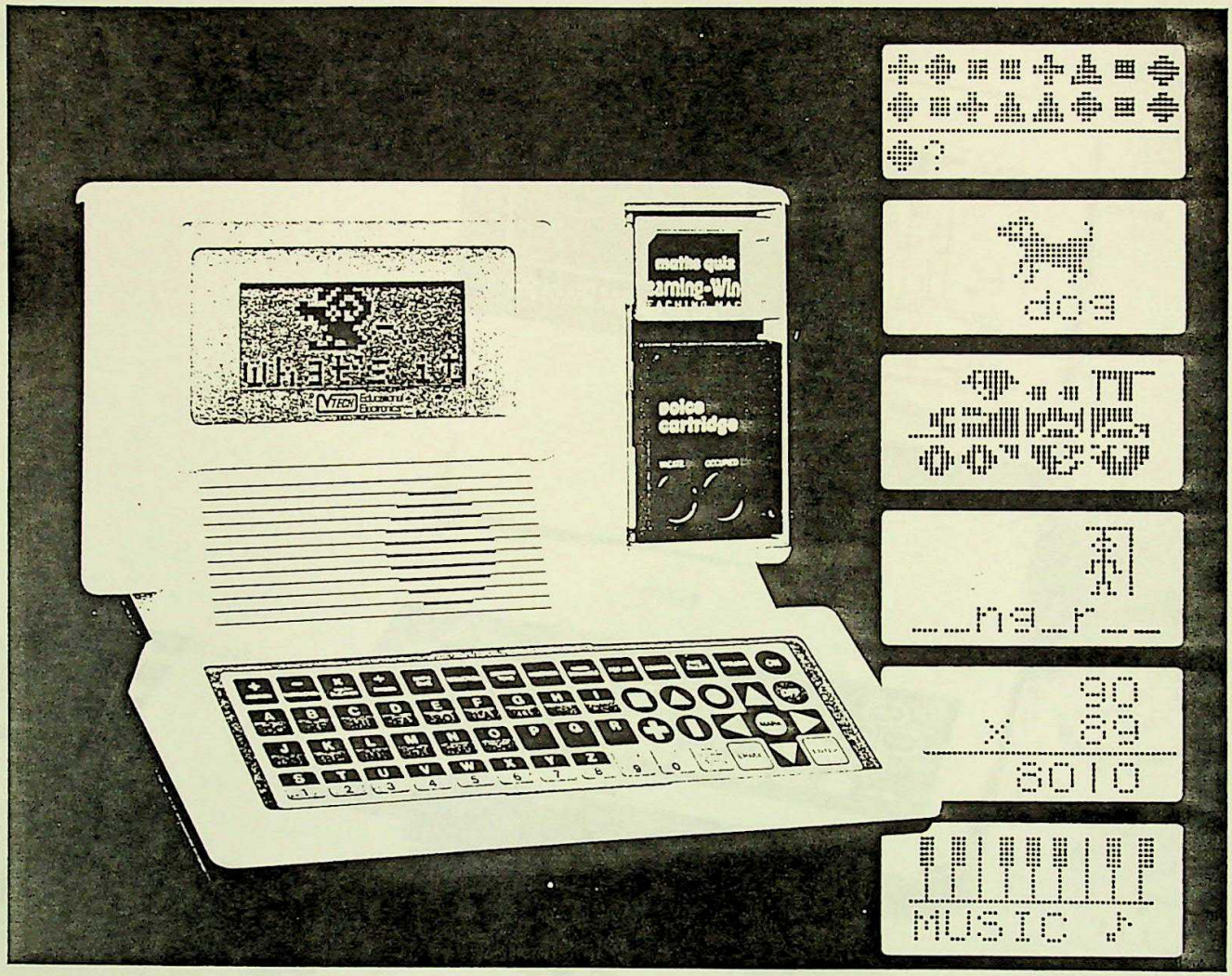
- Eight challenging mathematics activities built-in.
- Three programs in music fun and recognition.
- LED display screen shows numbers big and bright.
- Includes beautifully illustrated Matchbook containing 150 multiple choice questions to be answered with the help of Smart Start.
- Battery operated (6 "C" cells) or 9V AC adaptor. Not included.
- For ages 5 and up.

Stock No. 80-0920
Case Pack 10
Case Wt. 25 lbs.
Cube 3.5



LEARNING WINDOW®

NATIONALLY ADVERTISED



- Animated Super Dot Matrix Displays.
- 13 educational activities built-in.
- Exclusive pop art and mystery puzzle features plus...math, spelling, music and logic.
- Battery operated (6 "C" cells) or 9V AC adaptor. Not included.
- For ages 6 and up.

Stock No. 80-0840
Case Pack 6
Case Wt. 18 lbs.
Cube 3.4

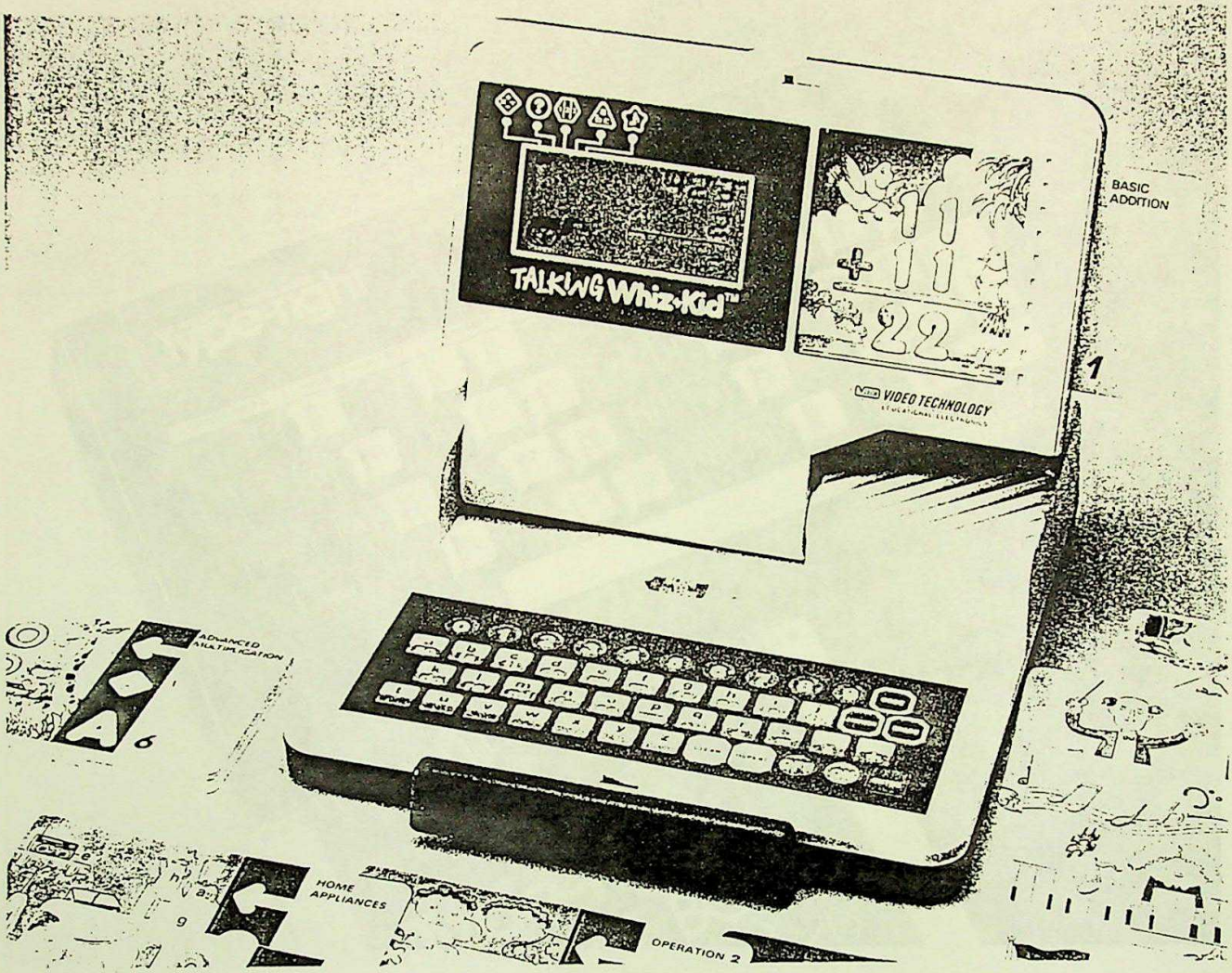
Voice Cartridge
Stock No. 80-0841
Case Pack 30 master/10 inner
Case Wt. 10 lbs.
Cube 1.0

Program Cartridges
Stock No. 80-0842
Number Power
Stock No. 80-0857
I.Q. Builder
Stock No. 80-0875
Alphabet Soup
Stock No. 80-0875
Assorted
Case Pack
30 master/10 inner
Case Wt. 9 lbs.
Cube 1

NATIONALLY ADVERTISED

AS SEEN ON TV

TALKING WHIZ KID™



Additional Cartridges
Stock No. 80-0945
Vocabulary Builder I
Stock No. 80-0946
Vocabulary Builder II
Stock No. 80-0905
Vocabulary Builder III
Stock No. 80-0944
Vocabulary Builder IV
Stock No. 80-0942
Assorted Cartridges
Case Pack
40 master/10 inner
Case Wt. 20 lbs. 3 oz.
Cube 2.8

Stock No. 80-0903
Case Pack 6
Case Wt. 24 lbs. 4 oz.
Cube 2.3

- Toy industry's hottest selling electronic learning aid.
- Teaches math, spelling, reading, music and more!
- Lap top computer design.
- 50 program cards that duplicate the feel of a "floppy disc" included.
- Expansion available through additional cards and cartridges.
- Includes two-player inter-active games.
- Many games include automatic scoring.
- Battery operated (6 "C" cells) or 9V AC adaptor. Not included.
- For ages 5 and up.

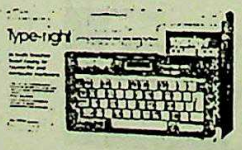
TYPE RIGHT™

NATIONALLY ADVERTISED

A pre-computer typing tutor. Actually teaches touch typing for typewriter and computer keyboard.

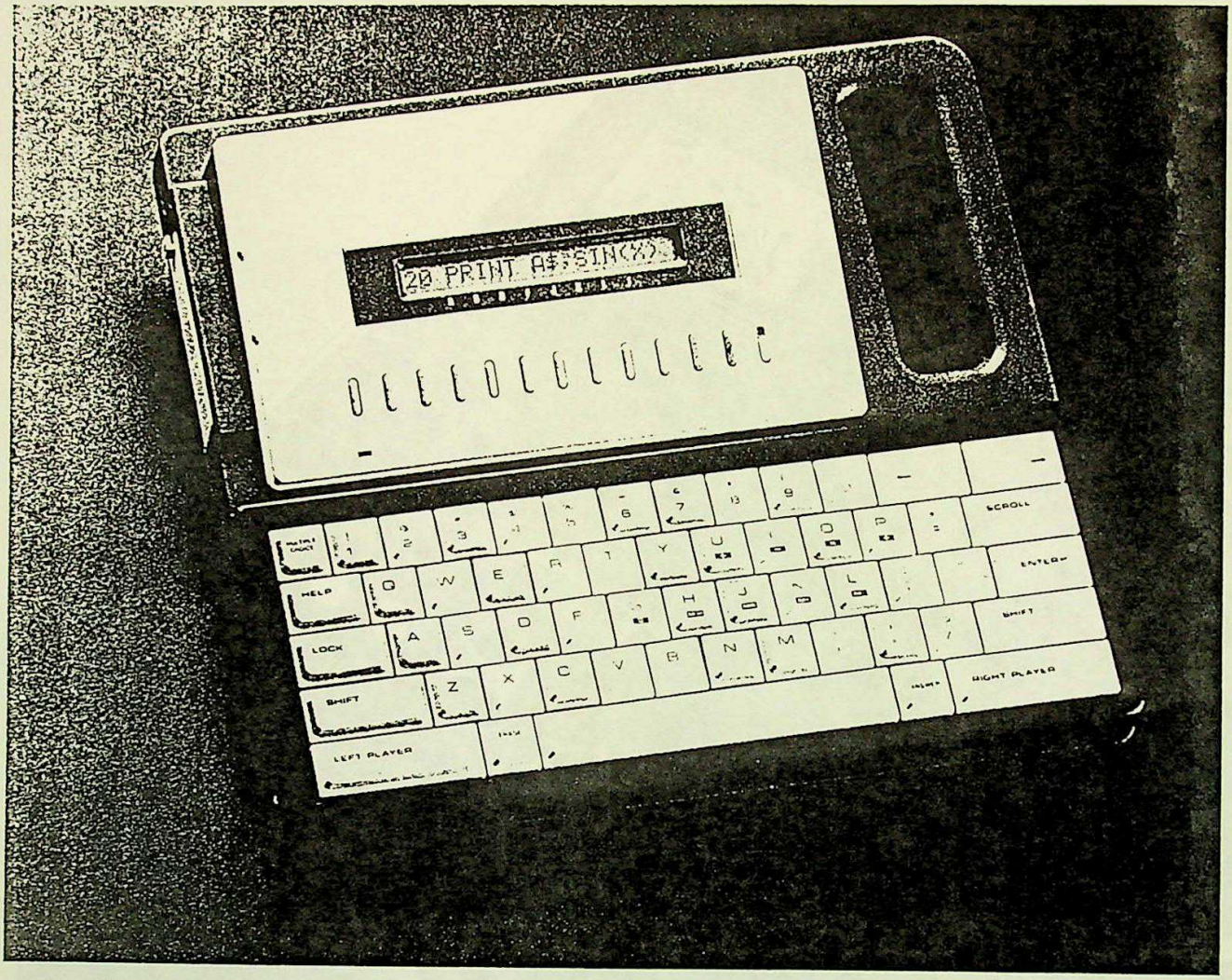
- Teaches typing skills for typewriter or computer keyboards.
- Monitors students' progress...grades both speed and accuracy.
- Nine courses and a game to make learning fun!
- Battery operated (4 "C" cells) not included.
- For students of all ages...9 and up.

Stock No. 80-0830
Case Pack 10
Case Wt. 27 lbs.
Cube 2.4



NATIONALLY ADVERTISED

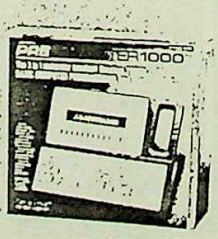
PRE-COMPUTER 1000™



Additional Cartridges
Stock No. 80-0989 Bible Knowledge
Stock No. 80-1001 Fantasy Trivia
Stock No. 80-1002 General Knowledge II
Stock No. 80-1003 Sports Trivia
Stock No. 80-1093 Assorted
Stock No. 80-1004 Speller (35,000 words)

Case Pack 36 master/6 inner
Case Wt. 26 lbs.
Cube 1.5

Stock No. 80-0980
Case Pack 4
Case Wt. 17 lbs.
Cube 2.0

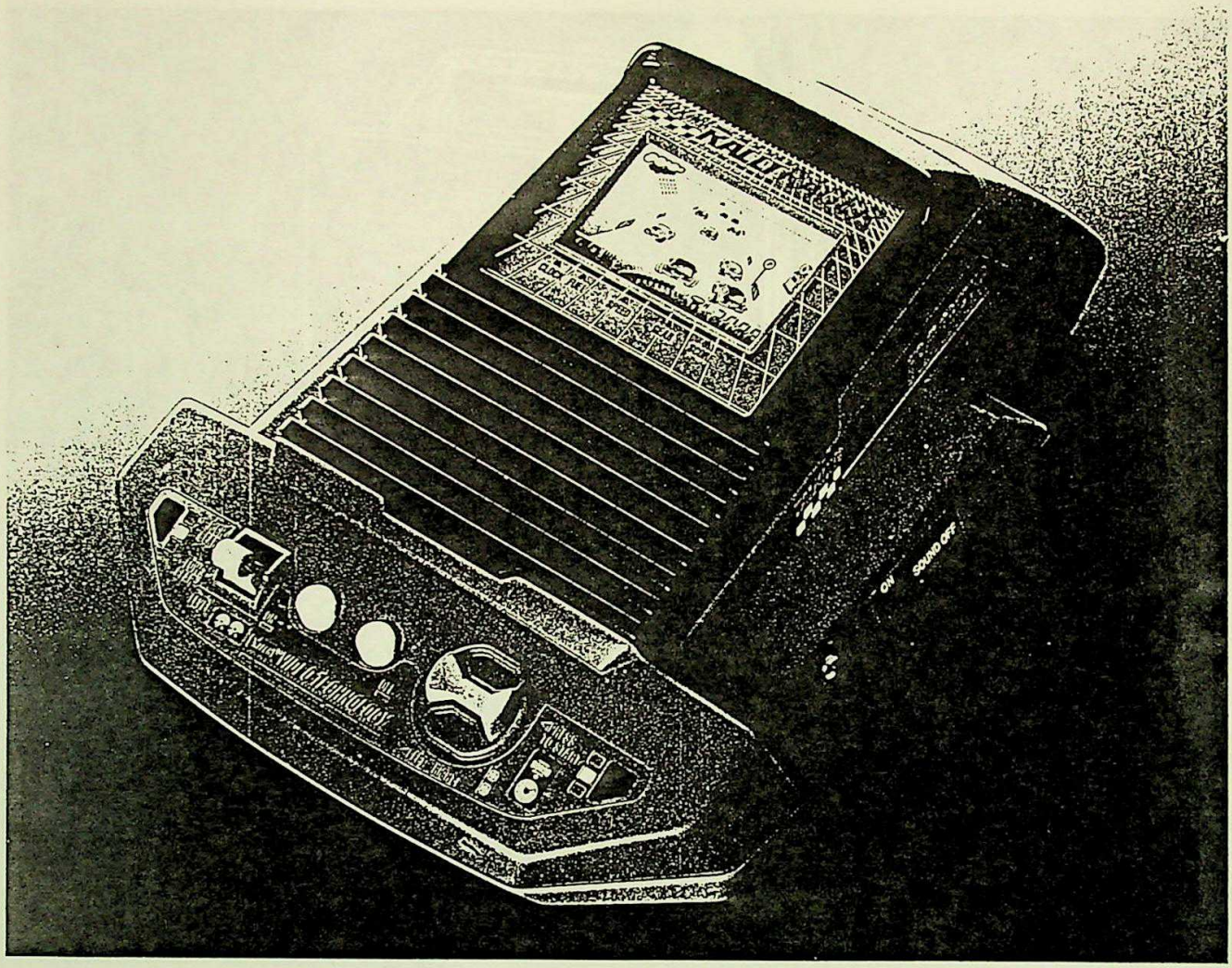


- Introduces computer functions and activities with a complete computer keyboard.
- Eight built-in programs help children learn typing, programming, math, spelling, geography, history and science.
- Also includes challenging general trivia questions and word games.
- Unlimited expansion with optional cartridges for years of continued fun for the entire family.
- Clear LCD display slowly scrolls questions across screen.
- Games can be played in one or two player mode.
- Battery operated (6 "C" cells) or 9V AC adaptor. Not included.
- For ages 9 and up.

Electronic/Talking RALLYRACER

All the fast paced thrills of Grand Prix Racing

NATIONALLY ADVERTISED



- It's a race against the clock! Maneuver the car through challenging road and weather obstacles to win the race
- Two skill levels - Novice and Pro
- Progressive screens for each level provide optimal play value
- Large LCD screen displays animated graphics
- Computer voice and true-to-life sound effects add excitement to realistic game play
- Battery operated (4 "AA" cells) or 9V AC adaptor. Not included
- For ages 6 and up

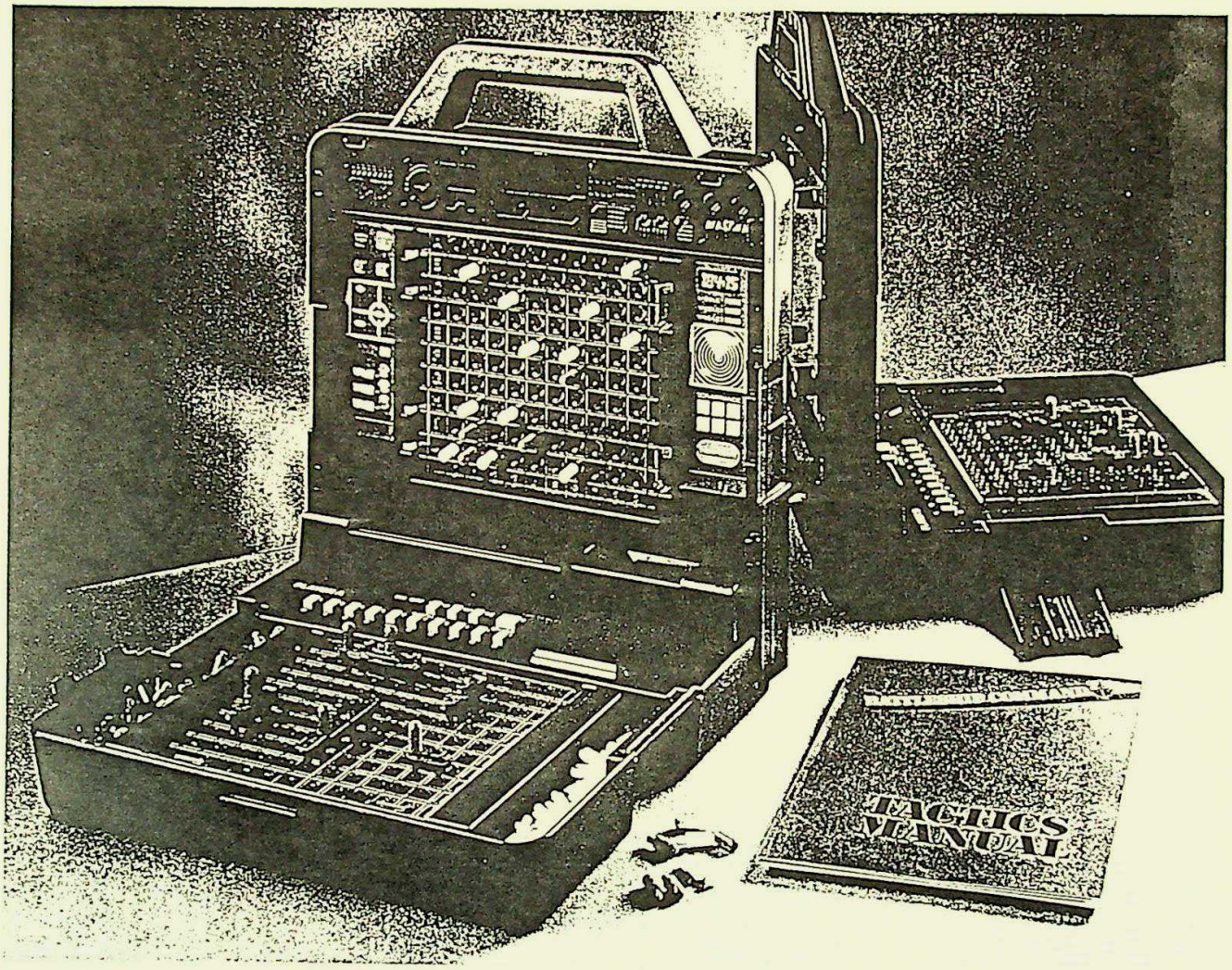
Stock No. 80-1037
Case Pack 12 master/6 inner
Case Wt. 16 lbs
Cube 3.5

NATIONALLY ADVERTISED

NEW FOR 1989

Electronic Talking BATTLESHIP COMMAND™

Computer speed, human skill and human sass



Stock No. 80-1050
Case Pack 4
Case Wt. 20 lbs. 3 oz.
Cube 3.4

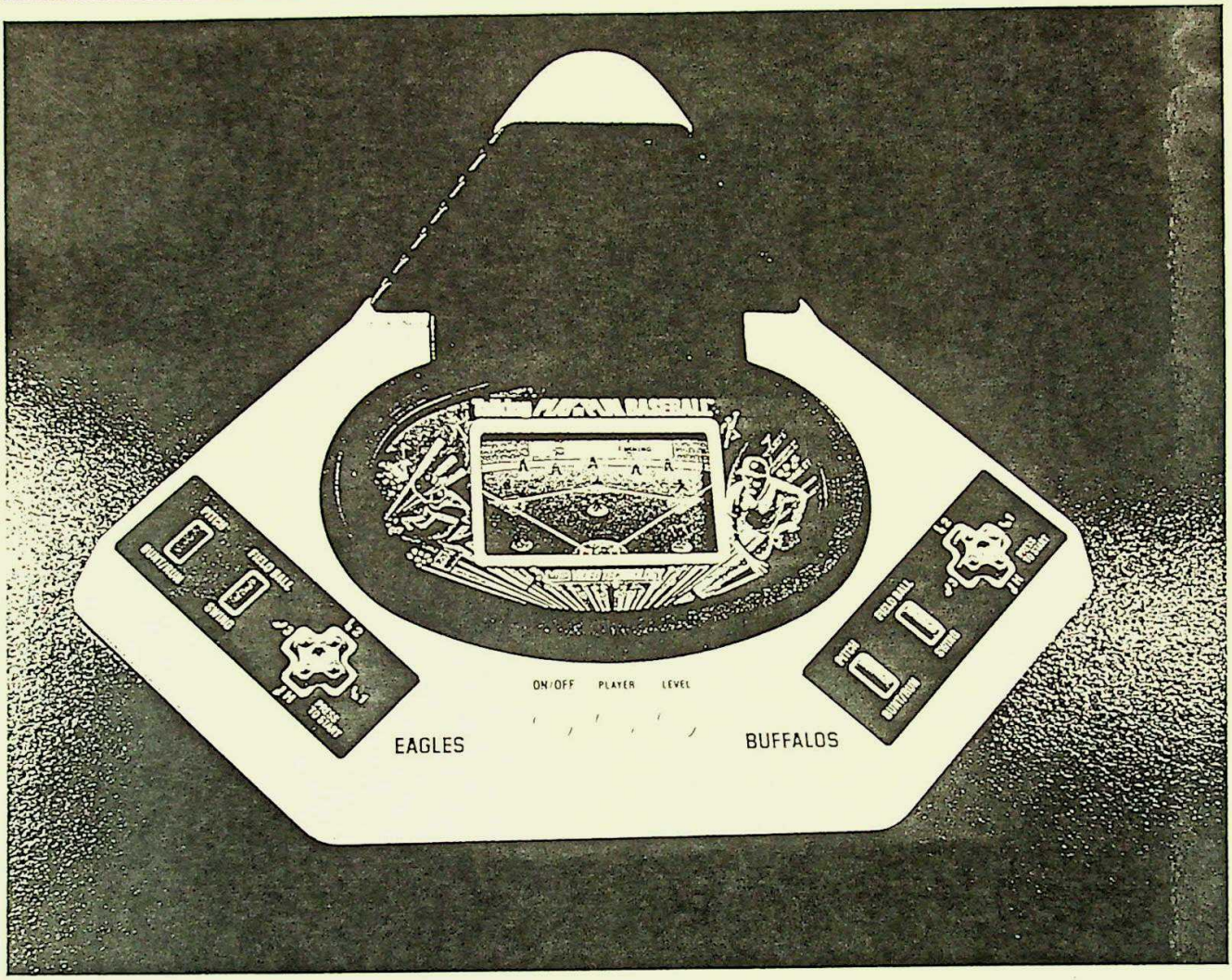
- 2 ways to play:
  2 Player battle action - Challenge a friend
  1 Player computer combat - Challenge the computer
  Special RADAR feature scans the ocean grid for the computer's ships
- Admiral's voice calls out the action
- Rapid fire sound effects and flashing LED lights indicate a direct hit
- Battleship Command folds into a convenient carrying/storage case
- Battery operated (4 "C" cells) or 9V AC adaptor Not included
- For ages 6 and up

Talking PLAY BY PLAY BASEBALL

9 Player diamond competition!

AS SEEN ON TV!

NATIONALLY ADVERTISED

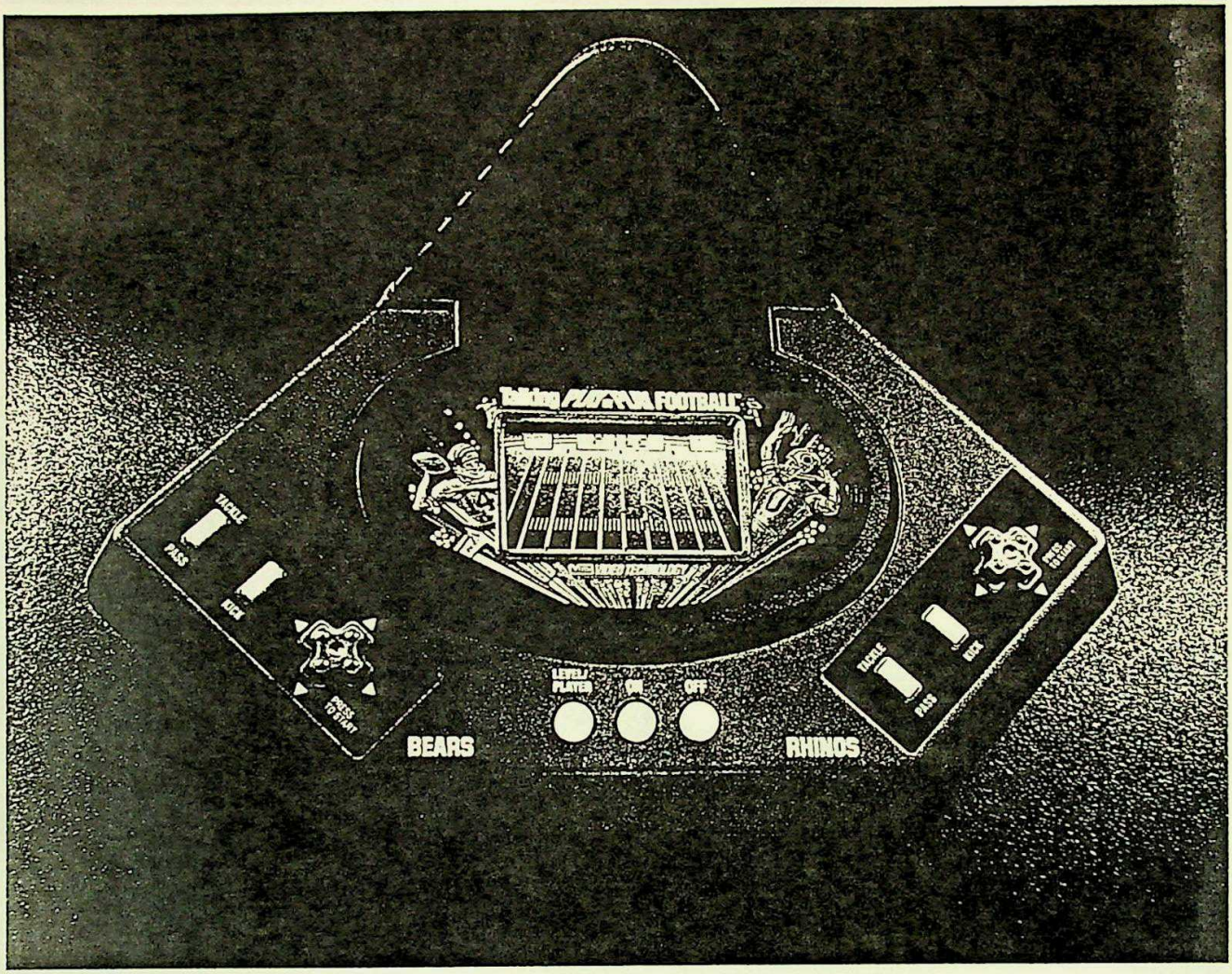


- Only table top game with complete teams
- Complete strategy options for offense and defense
- All the thrills and action of the real game
- Realistic announcer voice calls the action
- Large animated display shows the players as they move around the diamond
- Two levels of difficulty can be played in one or two player mode
- Battery operated (4 AA cells) or 9V AC adaptor Not included
- For ages 6 and up

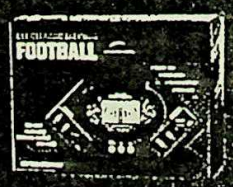
Stock No. 80-0922
Case Pack: 12 master/6 inner
Case Wt. 26 lbs.
Cube 6.6

Talking PLAYAWAY FOOTBALL

Challenging 11 player gridiron action!

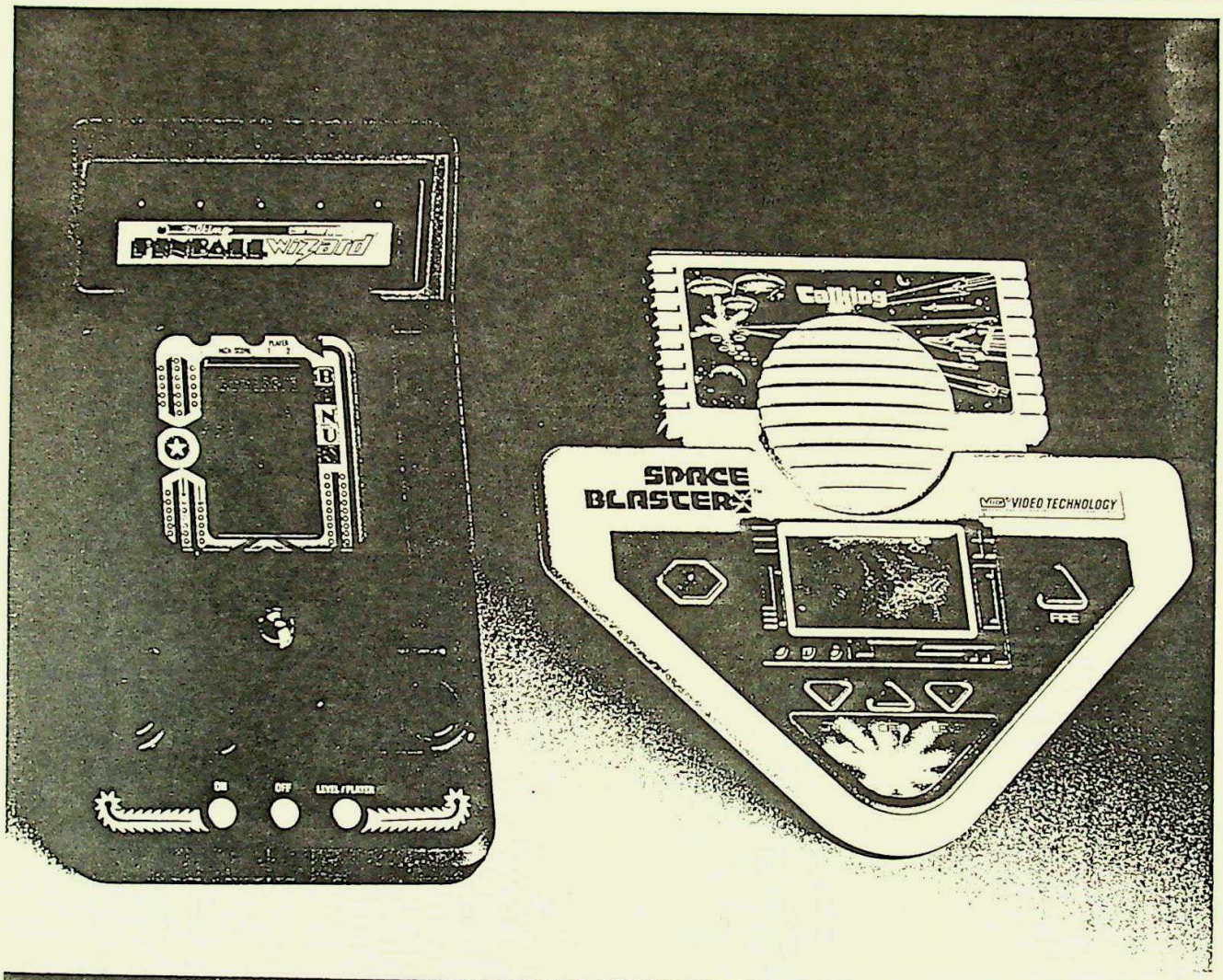


- Simply plug into top game with complete teams
- All the thrills and action of the real game
- Complete strategy options for offense and defense
- Realistic announcer voice follows the action
- Large animated display shows the players as they move around the field
- Two levels of difficulty can be played on the two player mode
- Battery operated or AC adaptor (Not included)
- Huddles & audibles



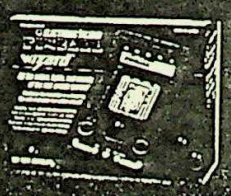
PINBALL WIZARD
TALKING SPACEBLASTERS

Arcade lights, sounds and action you can hold in your hand!



Talking SPACEBLASTERS

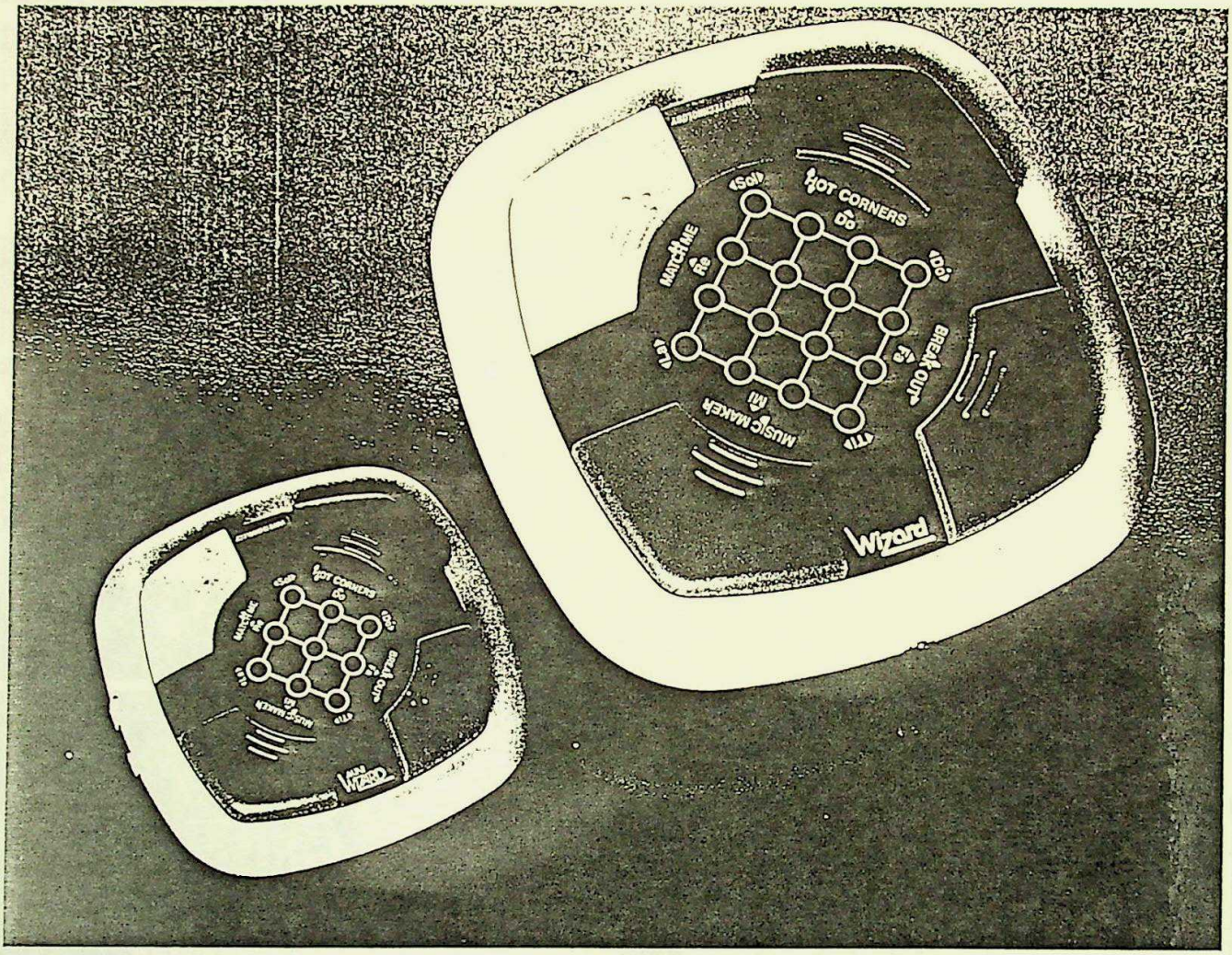
- Maneuver the spaceship into position and attack the enemy while avoiding enemy missiles and asteroids
- Large (1.5") screen graphically displays alternate action
- Voice and sound effects add to the excitement
- Four progressive scenes with 9 levels. Each player gets more difficult
- Battery operated (4 AA cells) or 9V AC adaptor not included
- For ages 6 and up



Stock No. 8[illegible]
Case Pack: 12 master cartons
Case Wt. 27 lbs. 8 oz.
Cube [illegible]

WIZARD™ AND MINI WIZARD™

The electronic fun game machine that teaches too!



MINI WIZARD

[illegible]

WIZARD

Table Top version

Four activities:

- Match Me — memory activity
- Music Maker — memorizes 24 notes
- Break Out — arcade game
- Hot Corners — action, hand/arm/eye coordination

Deluxe case size 9¼ x 9¼ x 2¾

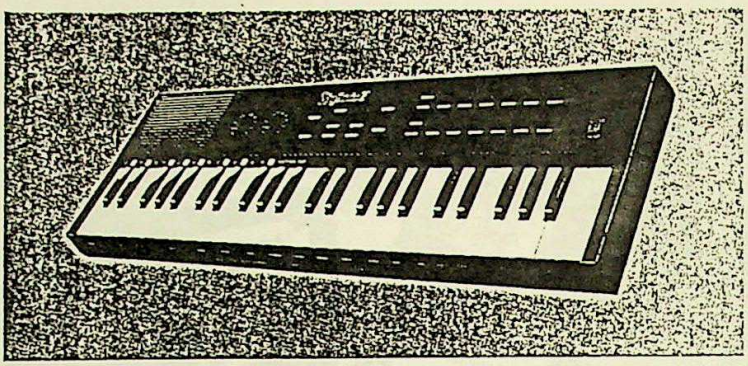
Battery operated (6 "C" cells)

9V AC adaptor (Not included)

(Ages 5 and up)

Stock No. [illegible] Case Wt. 22 lbs

Case Pack (6) Cube 2.4

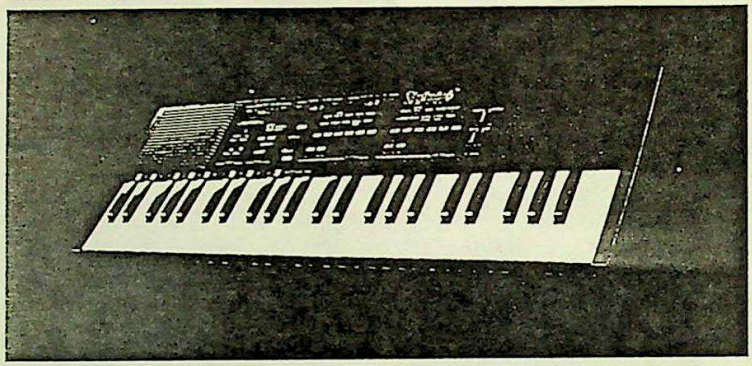


RHYTHMIC 2®

The perfect starter keyboard.

- 49 mid-sized keys.
- 10 popular built-in instrument sounds.
- 10 built-in rhythms.
- Built-in speaker and head phone jack.
- Battery operated (6 "C" cells) or 12V AC adaptor. Not included.

Stock No. 80-0837
Case Pack 6 ***Case Wt.*** 30 lbs. ***Cube*** 3.4

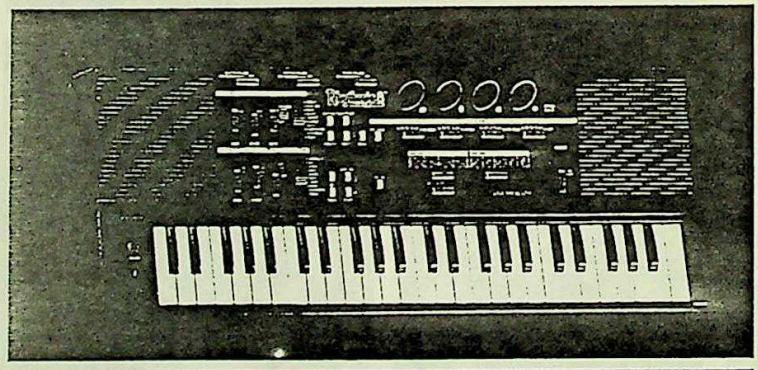


RHYTHMIC 6®

The advanced stereo electronic keyboard.

- Everything the Rhythmic 2 has and more!
- Two built-in stereo speakers.
- Built-in outlet for external amp.
- Battery operated (6 "C" cells) or 12V AC adaptor. Not included.

Stock No. 80-0862
Case Pack 6 ***Case Wt.*** 34 lbs. ***Cube*** 3.5



RHYTHMIC 8™

Big, big features in a mid-sized keyboard!

- Advanced 49 mid-sized key stereo electronic keyboard.
- 10 instrument sounds built-in.
- 10 pre-set rhythms built-in.
- Sound shaper synthesizer. • Bender control.
- Drum pads & programmable drummer.
- Battery operated (6 "D" cells) or 12V AC adaptor. Not included.

Stock No. 80-0967
Case Pack 3 ***Case Wt.*** 28.8 ***Cube*** 4

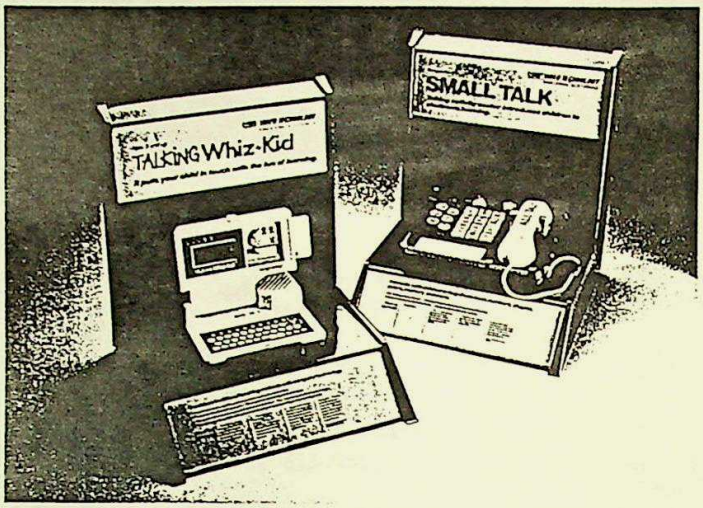
RHYTHMIC 10™

Multi-feature keyboard to create an orchestra of sounds.

- 49 full-sized keys with stereo sound.
- 12 pre-set instrument sounds. • 12 pre-set rhythms.
- Digital synthesizer. • Chord and voice variation.
- Bass pattern variation.
- Drum pads & programmable drummer.
- Battery operated (6 "D" cells) or 12V AC adaptor. Not included.

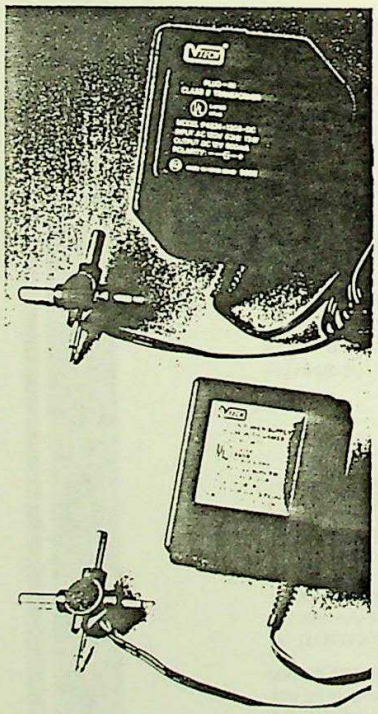
Stock No. 80-0984
Case Pack 2 ***Case Wt.*** 28 lbs 6 oz. ***Cube*** 4.5

DISPLAYERS AND ADAPTERS



Displayers

- Custom point of purchase displayers dramatically present each item in the Vitech technology line.
- Descriptive copy takes consumers in a self-demonstration of the product. The best way to increase sales!
- Small size is economical for shipping.



AC Adapters

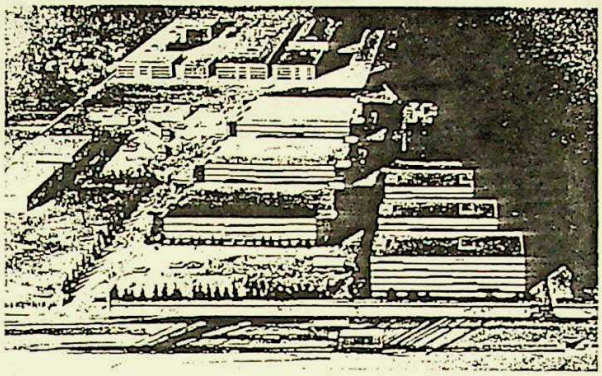
12 volt 800 mA
- Designed specifically for Rhythmic 2, 5, 8 and 10
- Universal 4 way plug

Stock No. 80-1023
Stock No. 80-1058
Case Pack
40 master/0 inner
Case Wt. 46 lbs
Cube 1.14

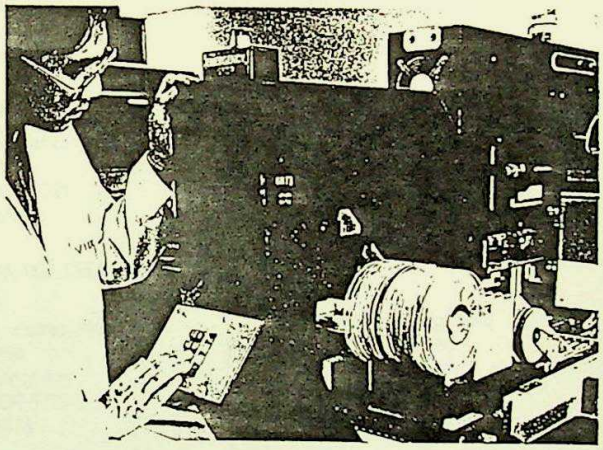
9 volt 500 mA
- Operates all Video Technology LCDs that accept an AC adaptor
- Universal 4 way plug

Stock No. 80-0877
Case Pack
40 master/10 inner
Case Wt. 31 lbs
Cube 1.2

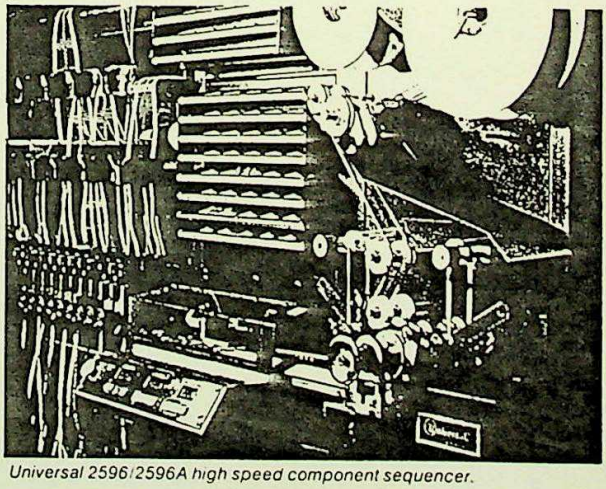
VIDEO TECHNOLOGY IS EXPANDING TO MEET CONTINUING DEMAND.



The new China factory will be complete in September of 1989. Total capacity will be 3000 workers in 300,000 square feet. With the addition of new equipment and space, we have made a commitment to the future.



Dynapert MPS 500 SMD placement system.



Universal 2596/2596A high speed component sequencer.

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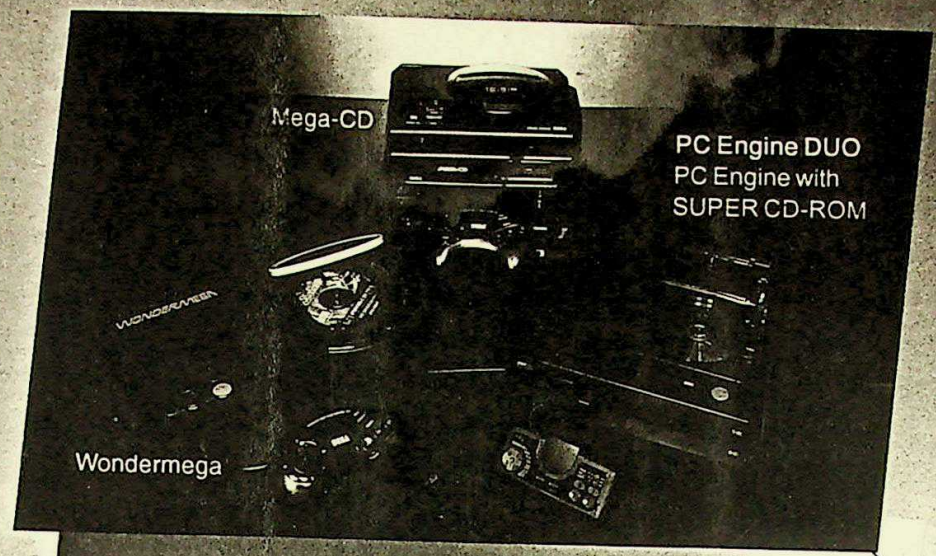

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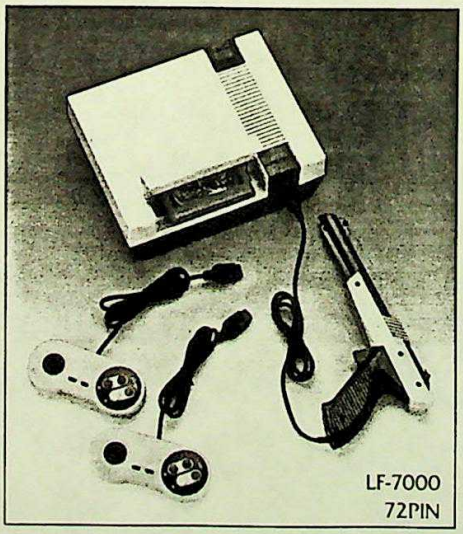
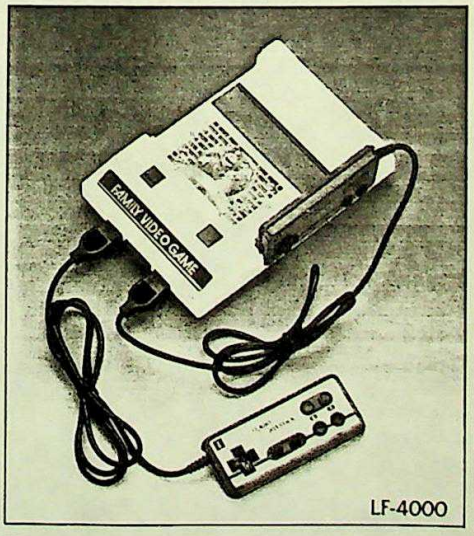
LF-6000



LF-7000
72PIN



LF-4000

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ELECTRONIC/TALKING

LITTLE SMART SUPER SORTER™

For all sorts of fun!

Deluxe talking activity sorter adds a new twist to matching colors, shapes, numbers & more!

VIDEO TECHNOLOGY INDUSTRIES INC.
1992
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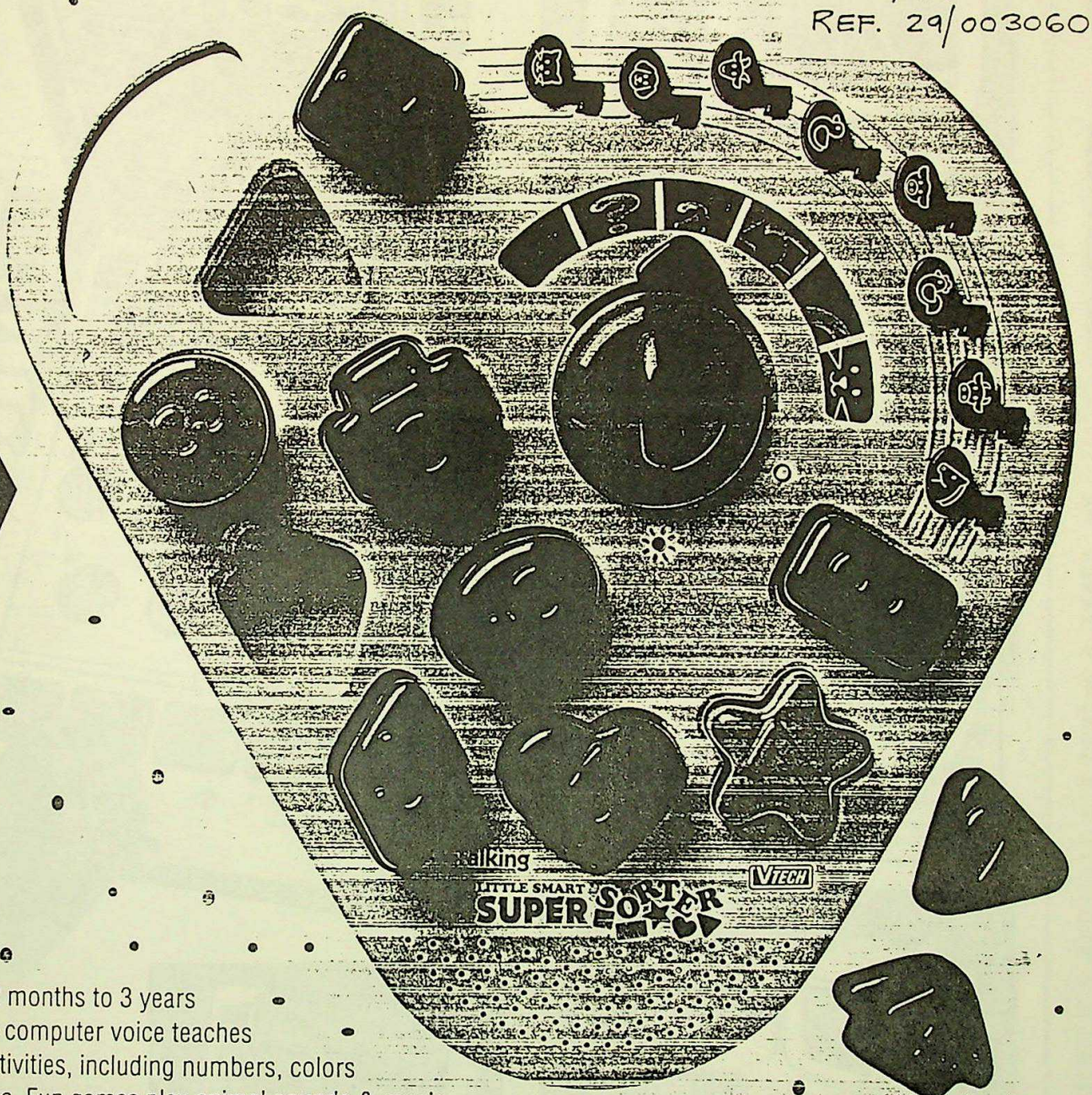
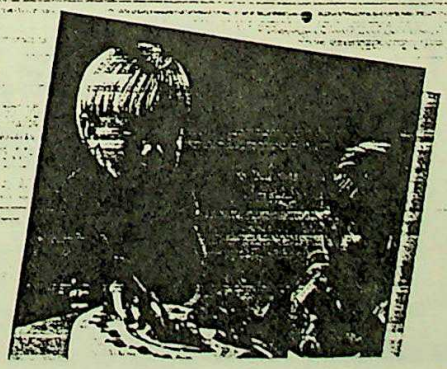
NEW!



Ages 12 months to 3 years

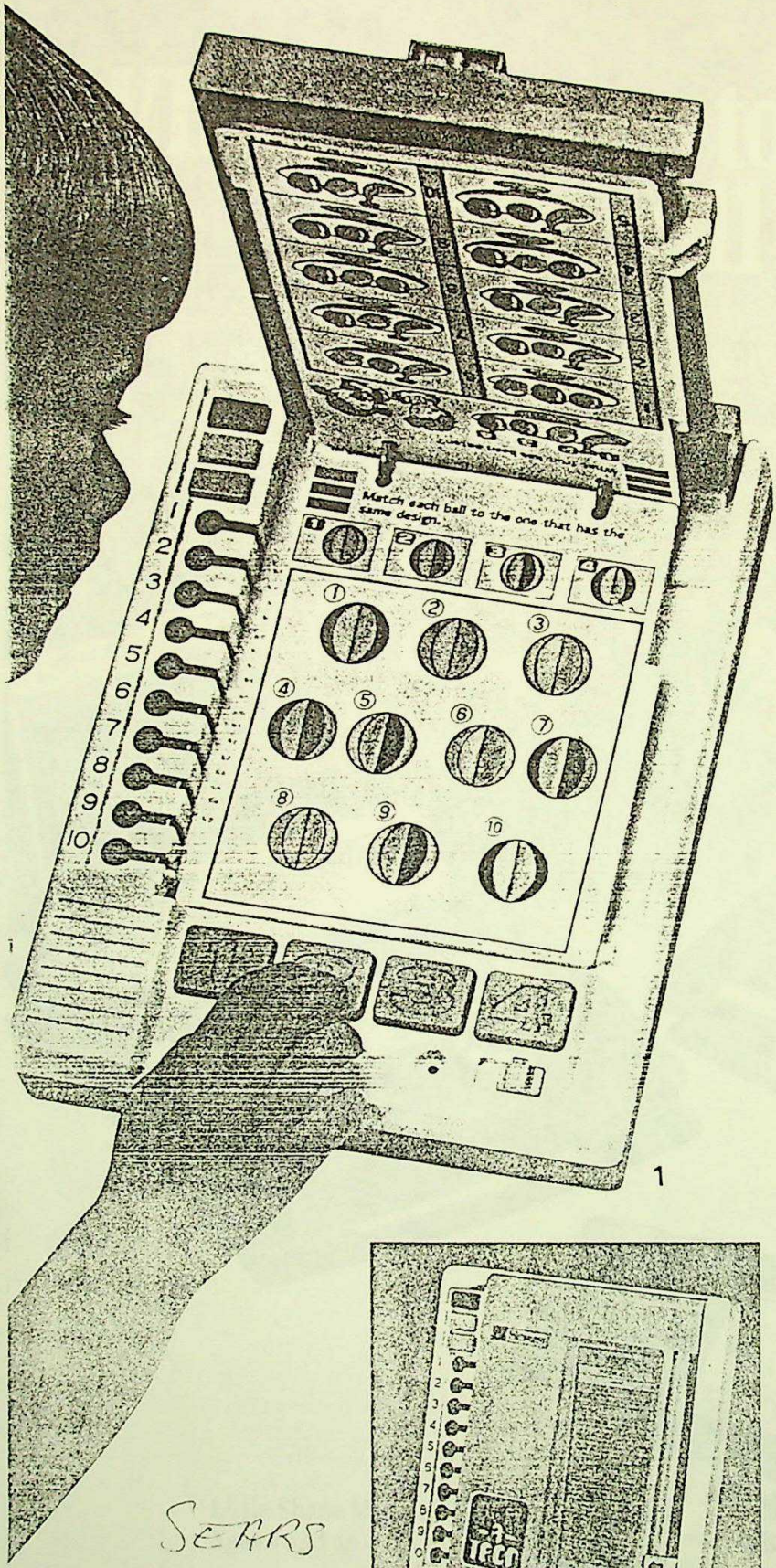
- Friendly computer voice teaches 6 fun activities, including numbers, colors & shapes. Fun games play animal sounds & music.
- Find It game teaches matching & memory skills.
- 10 colorful chunky shapes with numbers.
- 10 sing along nursery rhyme melodies.
- 8 fun animal sounds.
- Battery-operated (4 "AA" cells not included.)

TV/PRINT

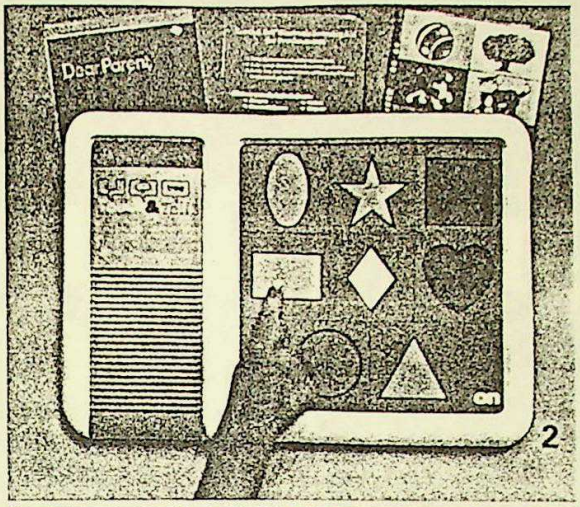


Stock No. 80-1469 Case Pack 6
Case Wt. 17 lbs.10 oz. Cube: 3.46

You're never too young to learn



1



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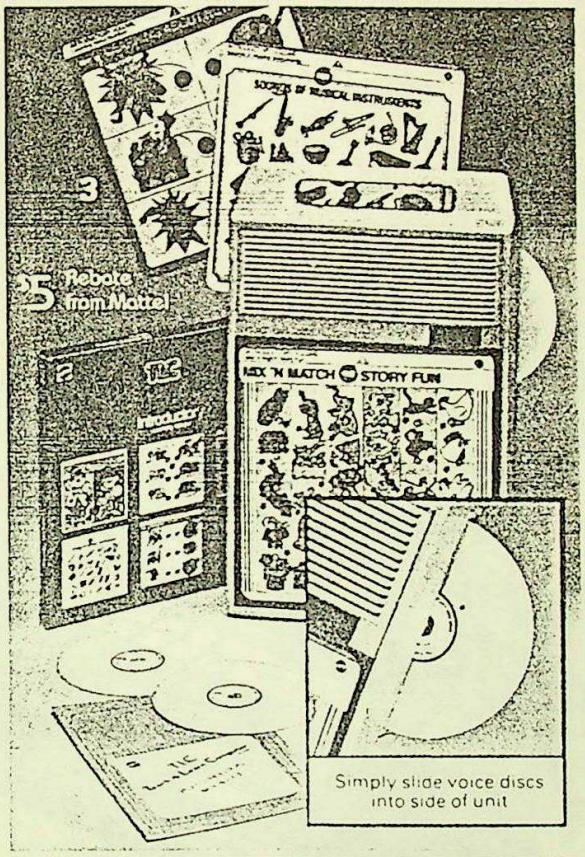

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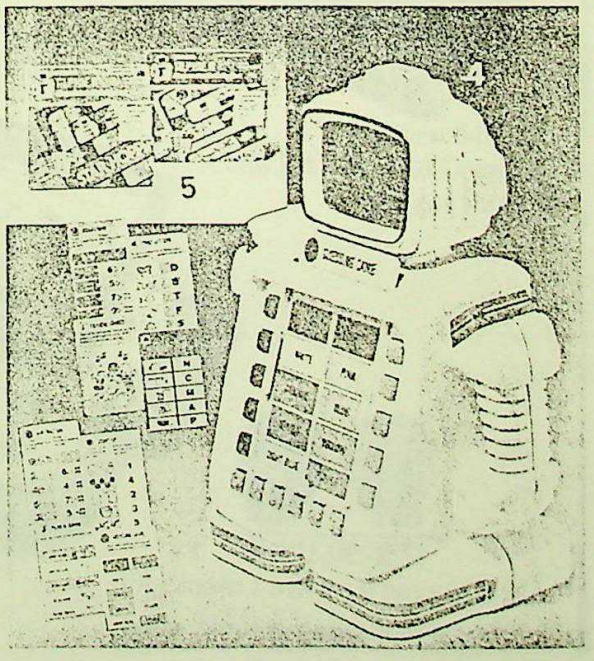

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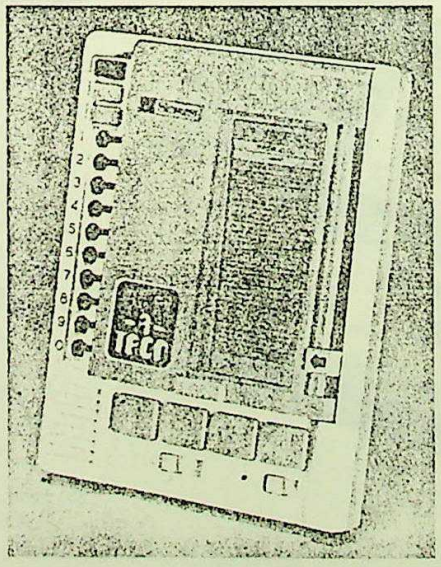

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Ages 7 and up

Carmen Sandiego
A.C.M.E. Crime Net Computer
Ages 9 and up

Little Shape Matcher™
Ages 3 and up

DIG/60

Playthings 3/1994
P.38.

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TEAM CONCEPTS™

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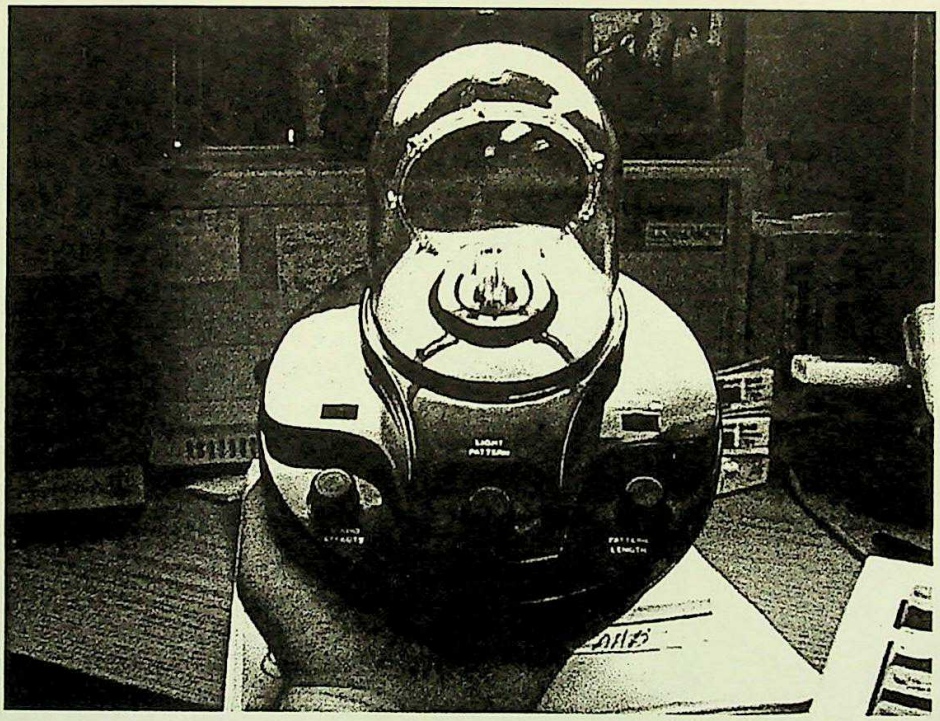

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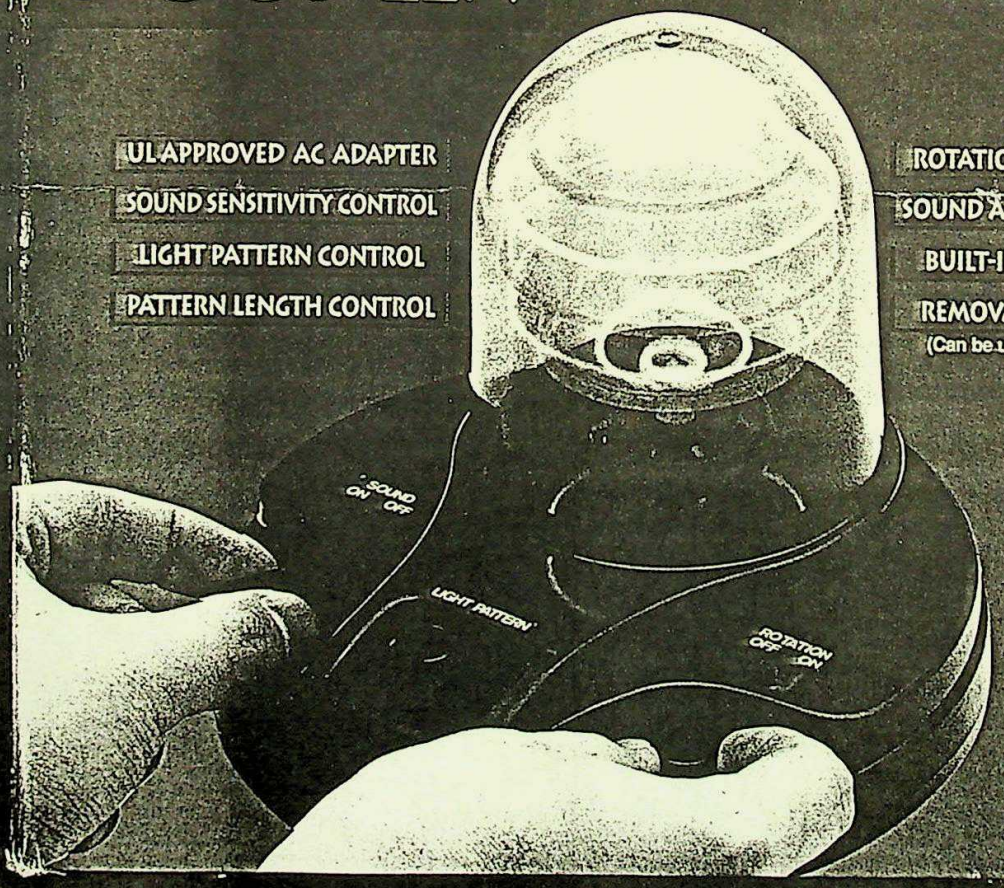
Light Doodler is loaded with easy-to-use features that allow anyone to create dazzling 3-D light sculptures in a snap. Its plug-and-play interface makes it fun and simple to doodle with light!

- UL APPROVED AC ADAPTER
- SOUND SENSITIVITY CONTROL
- LIGHT PATTERN CONTROL
- PATTERN LENGTH CONTROL
- ROTATION/FREEZE SWITCH
- SOUND ACTIVATION SWITCH
- BUILT-IN SOUND PICKUP
- REMOVABLE DUST COVER (Can be used on or off the unit)



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ore becoming a televi-
tor, said she believes
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pressure are real. "I
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she said of Zobel. "We
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efense lawyer and for-
urt judge William H.
the independence of
"now threatened un-
er era in history."
the 1996 furor over
Judge Harold Baer's
ed decision to sup-
evidence that Baer
unconstitutionally
lican lawmakers com-
ven President Clinton
rough a spokesman
ask Baer to resign if
re not changed. Baer
is ruling, for reasons
ad to do with his own
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se.
ay, "I am fearful that
served in cases involv-
sy, where a judge is
his neck out and rule
s fair but unpopular."

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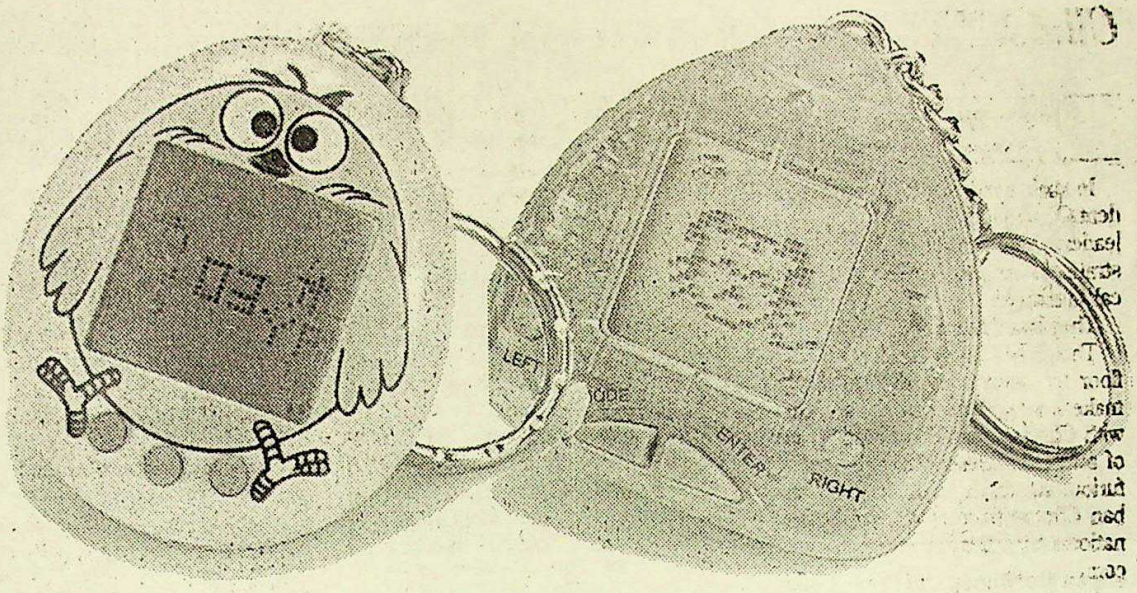

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Make it your best buddy but remember to feed it, pamper it and keep it clean. Reg. $18

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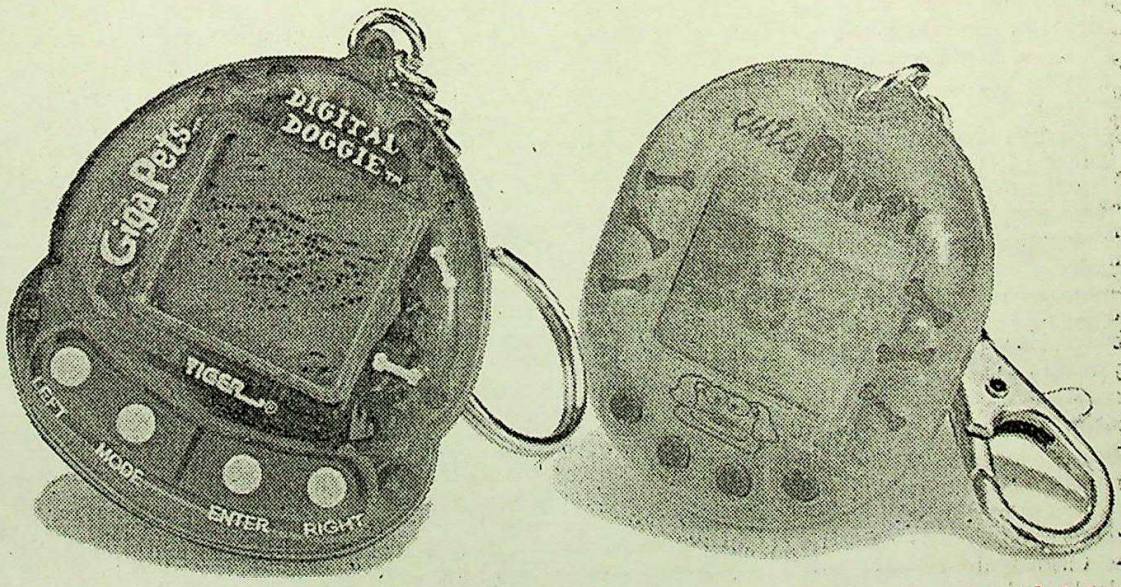

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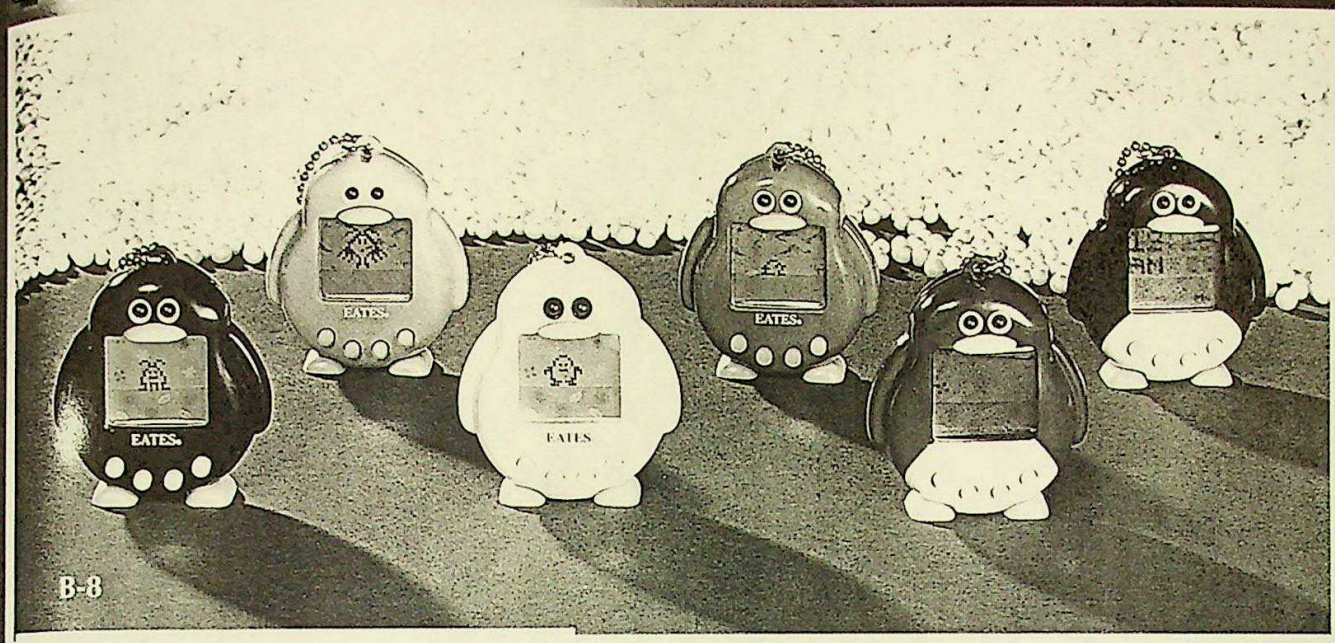
LIFCHUT'S

PRO-STAR LCD GAME



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EA Series – Box Type Multi Game

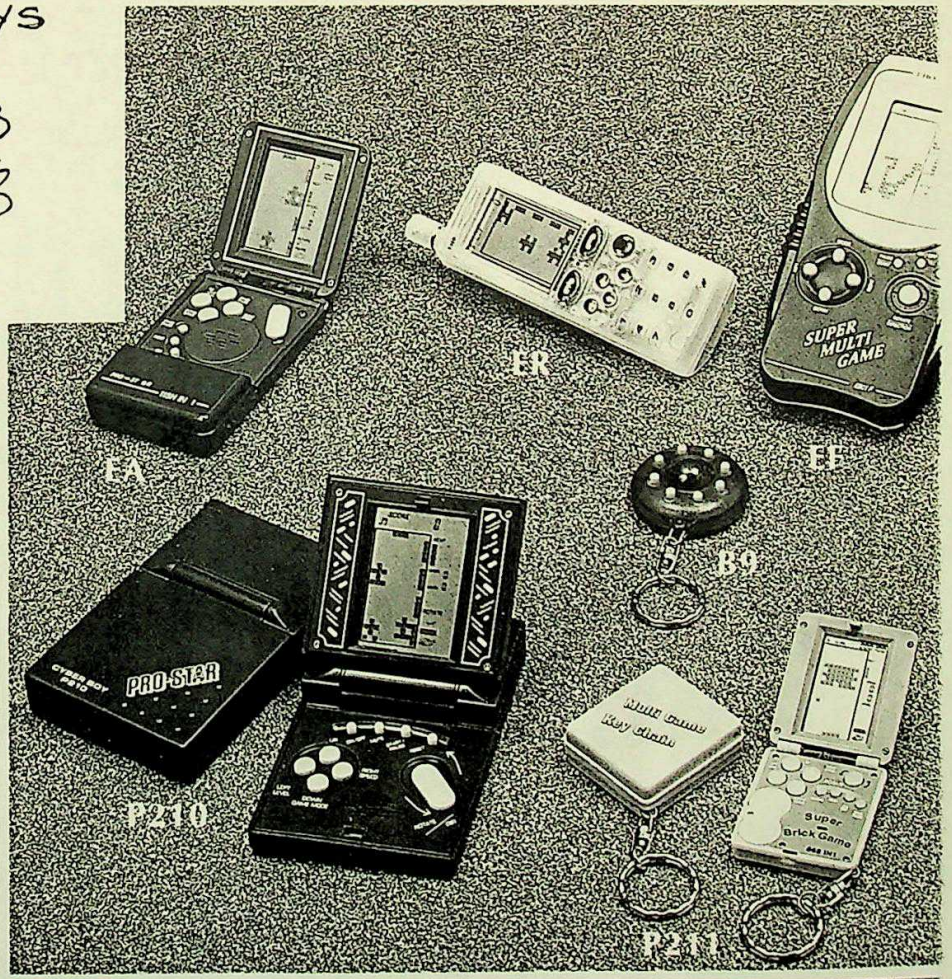
E668N – Super Brick Game

EB Series – Folding Box Multi Game

B-9 – Action Game

EF – Super Multi Game

All brick games available with 2,9, 999, 9999, 38,118, 256, 512, 668 in 1



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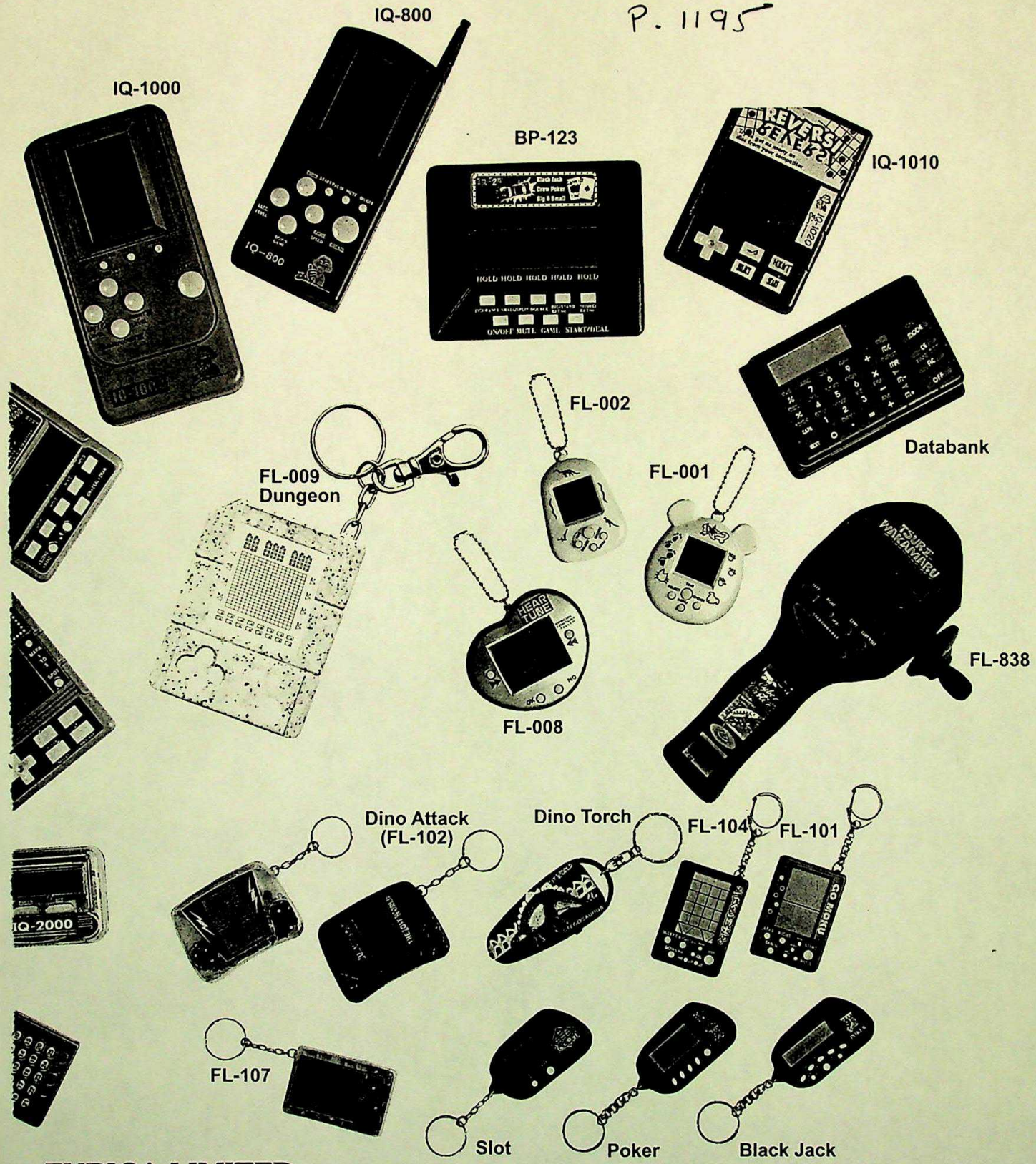

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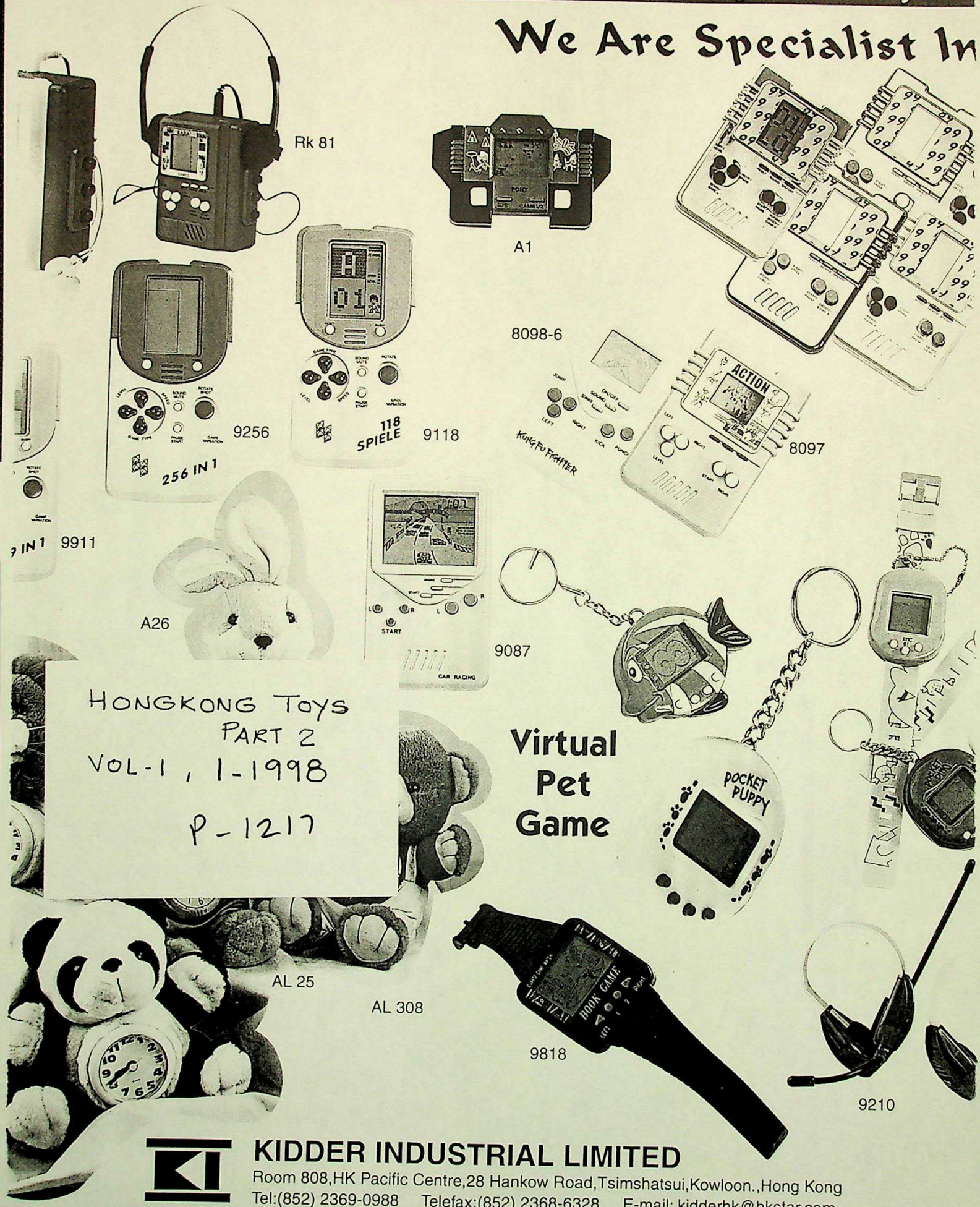

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GSK 600
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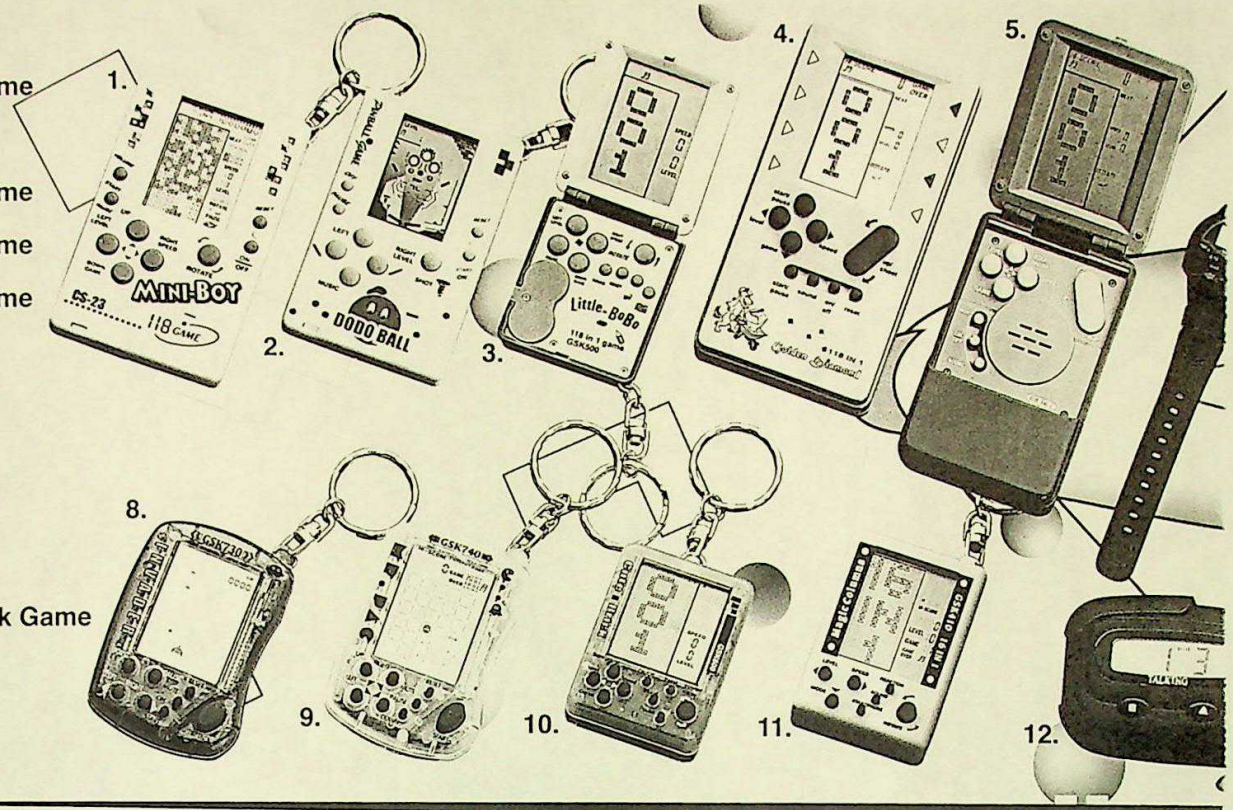

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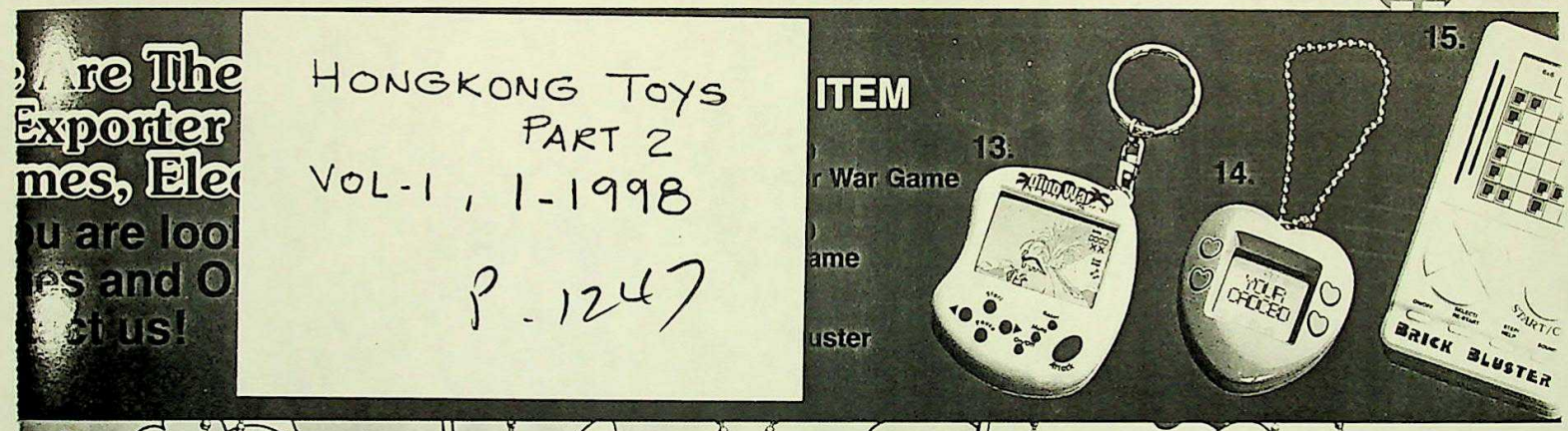

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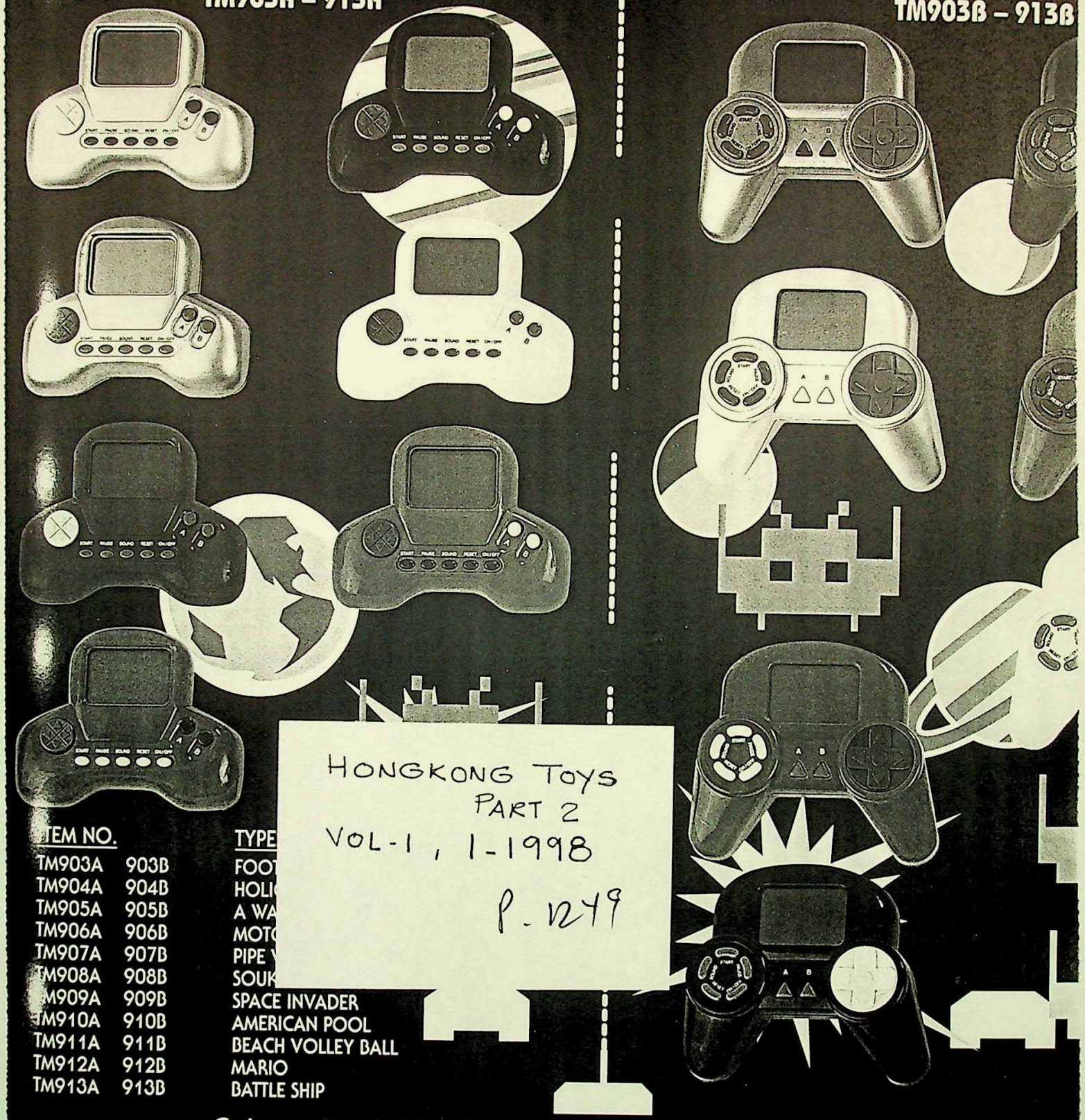

ITEM NO.		TYPE
TM903A	903B	FOOT
TM904A	904B	HOLI
TM905A	905B	A WA
TM906A	906B	MOT
TM907A	907B	PIPE
TM908A	908B	SOUK
TM909A	909B	SPACE INVADER
TM910A	910B	AMERICAN POOL
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Colours Available: Gold, Silver, Black, Yellow, Red, green, Blue.
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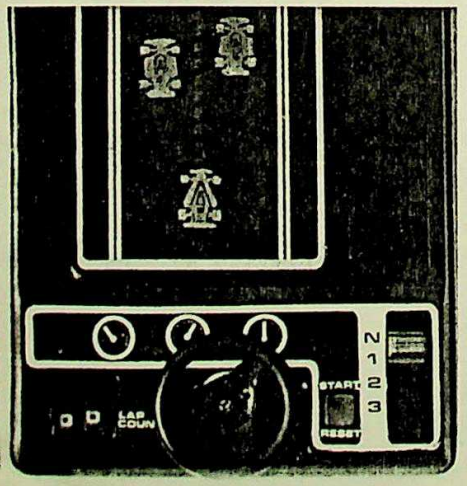
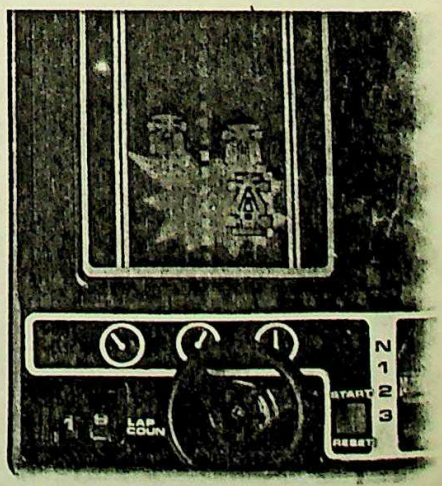
Digital Derby™ TV

This new digital auto race will have kids racing for their toy stores. It looks and works just like the big electronic arcade raceway games, but you can carry Digital Derby around with you. Steer and shift, racing against other cars, to avoid accidents and move through traffic. If you crash, the alarm flashes and costs you laps. How many laps can you race before the time runs out? Equipped with lap counter, reset button and automatic timer. Two "AA" batteries, not included. Race drivers ages 6 and up will rev up their engines when they see it.

Stock No.: 7034
Standard Pack: 12
Carton Weight: 12 lbs.
Individual Size:
9" x 6" x 2¼"
Pat. Pend.

P. 32





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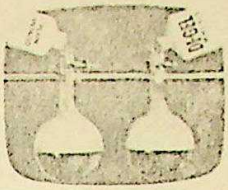
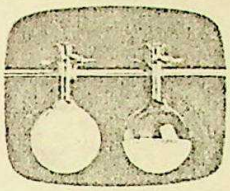
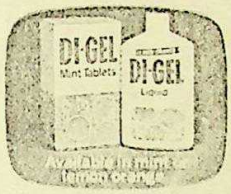


These identical mixtures of laboratory acid and gas represent the misery of acid indigestion complicated by gas. A plain antacid is added to one, Di-Gel to the other.



Di-Gel quickly neutralizes the acid and breaks up the gas. The plain antacid is not made to relieve this problem. It works only on the acid, while Di-Gel relieves both. Read and follow label directions.



Get fast relief. Get the Di-Gel® Difference.

Computer chess: Easy to play, not easy to beat

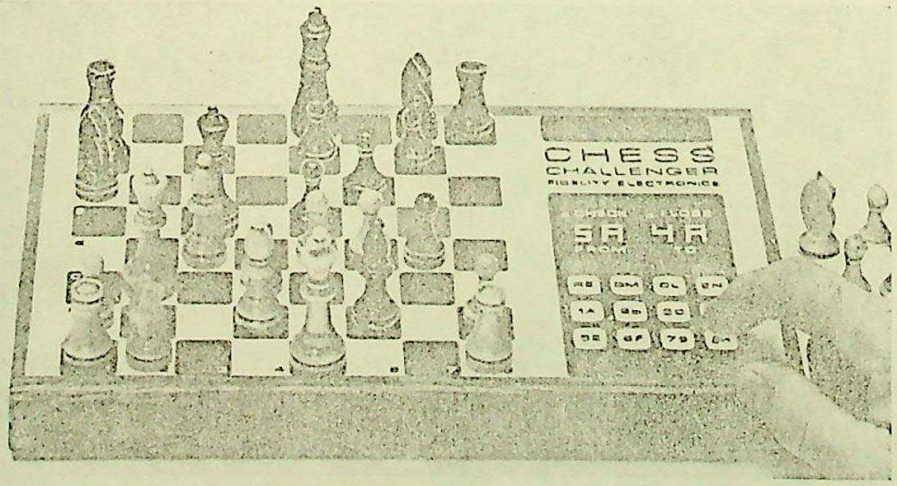
It used to take a computer big enough to fill a kitchen, but no more. To play chess against a computer today, all you need is a compact board-sized Chess Challenger.

The $199 game has a full-blown computer inside, programmed at a level to challenge experts while teaching beginners. Average players beat it 25 to 70 percent of the time.

You talk to the computer via a keyboard. It talks back in red LEDs above the keys. The board has special lettering you use to key plays into the computer. Moves even include castling and en passant!

The set, with wooden pieces, is available from Chafitz, 1055 First St., Rockville, Md. 20850. It's also in the fall catalog from Heath Co., Benton Harbor, Mich. 49022.

It's wired and tested and plugs into 110-volt a.c. Great for learning and practicing, it even can tune and sharpen the game of an expert.—*Judy Curtis*

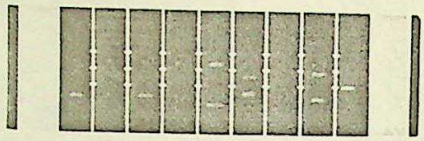


Instant chess partner is Chess Challenger, a computerized board by Fidelity Electronics.

Compare

Look at this low price for your choice of three of the most popular electronic sports games ever **$22.99** each without batteries

Have a road race in your living room, shoot baskets in the kitchen or play football while riding in a car! These hand-held electronic games are fun you can take almost anywhere . . . at a price almost anyone can afford.



The computer controls the defense and you control the offense as you try to score an **Electronic Touchdown!** Get all the excitement of a real football game as you block, run, kick and even pass. Shake tacklers as you race downfield. Set up a pass play and throw the bomb. Two different skill levels let you speed up the defense to play "Semi-Pro" or "Pro". Two players can compete by controlling the opposing offenses. Electronic sound effects include referee whistles and even a song that plays when a touchdown is scored. LED displays give you time, score, downs, yards-to-go and field position. Solid state design with plastic case 7x4¼x1¼ inches high.

AGES: 8 to adult.

ORDERING INFO: Requires one 9-volt battery or AC adapter, not included, order below.

49 TH 65352—Shpg. wt. 12 oz. **$22.99**

DieHard 9-volt Alkaline Battery (not shown).
49 C 46859—Shpg. wt. 2 oz. . . . . Each **$1.49**

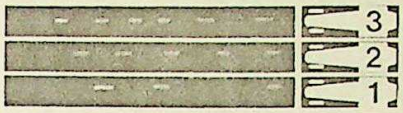
AC Adapter for Electronic Touchdown (not shown). UL listed. For use with 6, 7½ or 9-volt electronic games. Miniature and sub-miniature adjustable plugs, 9-volt battery clip tip included. 110–120-v., 60-Hz. AC. 6-ft. cord. Not for children under 8.
49 TH 65244—Shpg. wt. 6 oz. **$4.99**

Electronic Basketball pits your basketball skills against a computerized defense. It's a race against time as you move onto the court and drive past the defensive players for a lay up. Shoot as many baskets as you can before the timer counts down 24 seconds. Action includes blocked shots and rebounds. Two skill levels let you speed up the defense to make scoring more challenging. Two-player memory lets you take on an opponent. Sound effects for a basket made, turnover, end of quarter, blocked shot and end of game. LED scoreboard. Solid state design. Plastic case measures 5⅞x3½x1¼ inches high overall.

AGES: 8 to adult.

ORDERING INFORMATION: Requires 4 "AA" batteries, not included, order at right.

49 TH 65453—Shpg. wt. 8 oz. **$22.99**



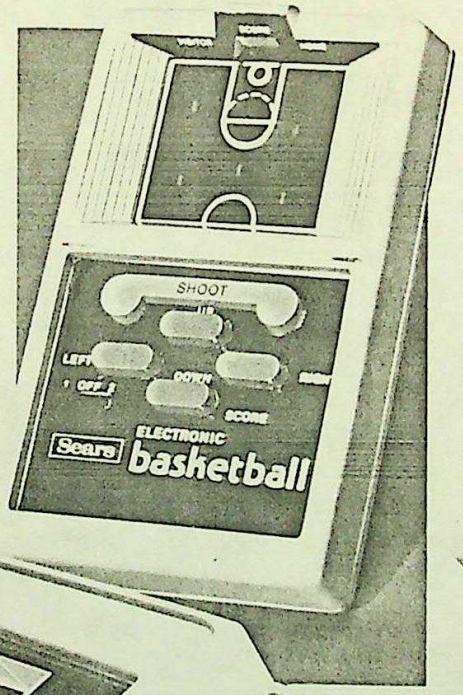
Auto Race brings you the thrill of realistic raceway action. Try to complete 4 laps before timer counts down 99 as you shift gears and gun it up to high speed. Avoid collisions by cutting from lane to lane in a series of close calls. Hear your "motor" roar as you shift gears. Hear sound effects for victory, defeat and crack-ups. LED scoreboard shows elapsed time, counts laps and number of collisions. Solid state design. Plastic case. 5½x3½x1¼ in.

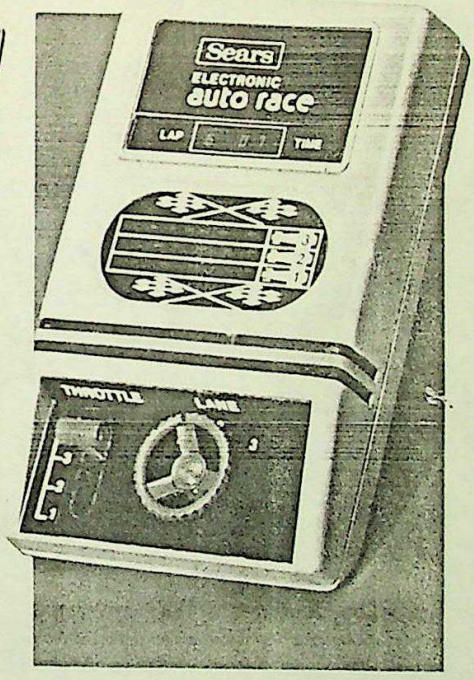
AGES: 7 to adult.

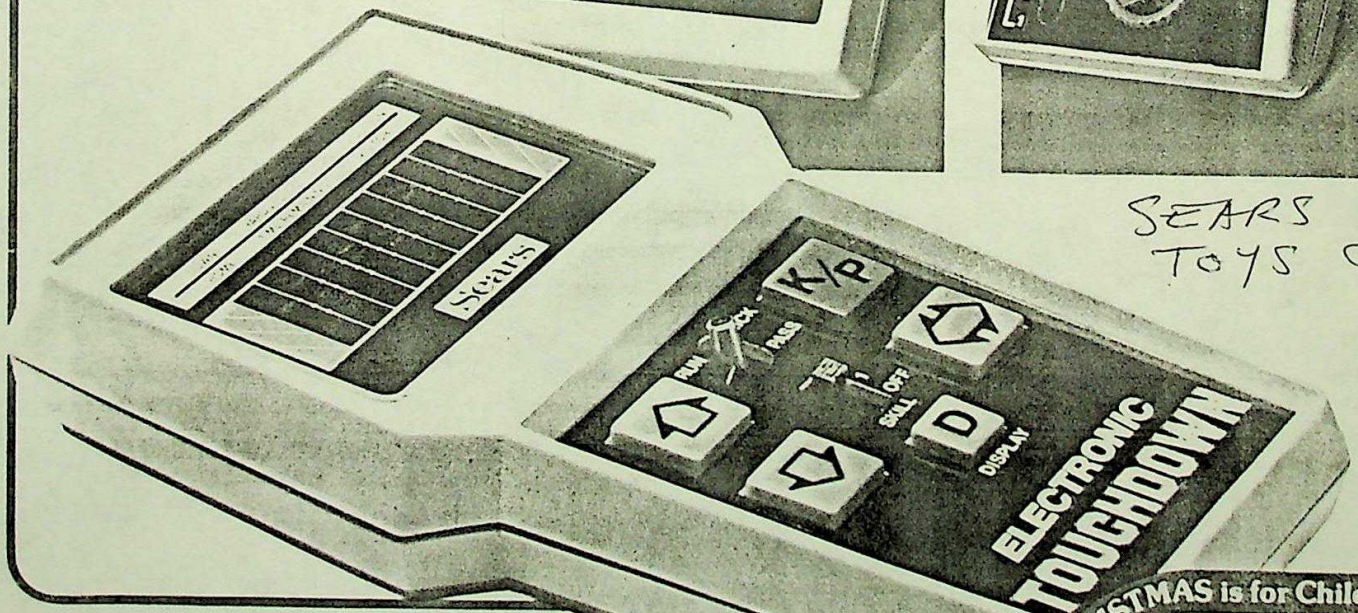
ORDERING INFORMATION: Requires 3 "AA" batteries, not included, order below.

49 TH 65452—Shpg. wt. 8 oz. **$22.99**

DieHard "AA" Alkaline Batteries (not shown). For above and at left. Package of 2.
49 C 46819—Shpg. wt. 2 oz. . . . . Pkg. **$1.19**







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CHRISTMAS is for Children

FAMILY GAME CENTER

ATARI® VIDEO GAMES NEW

Atari's Video Computer System™ offers the best in programmable TV games! Features bright, crisp color, realistic sound effects, interchangeable controllers, and difficulty option switches. No batteries needed. Comes with controllers, AC adapter, and TV switch box. (Television set and keyboard not included.)
#ATCX2600 (8 lbs) **$159.95.**

Choose from these Game Program Cartridges (1 lb) **$21.95** each:
#ATCX2602 Air-Sea Battle
#ATCX2605 Outlaw
#ATCX2606 Slot Racers
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#ATCX2612 Street Racer
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#ATCX2621 Video Olympics
#ATCX2622 Breakout
#ATCX2623 Home Run
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#ATCX2625 Football
#ATCX2626 Miniature Golf
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#ATCX2628 Bowling
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#ATCX2633 Night Driver
#ATCX2634 Golf
#ATCX2642 Concentration game
(requires #ATCX50 Keyboard Controller Pair, $19.95, for operation)
#ATCX2643 Codebreaker
(requires #ATCX50 Keyboard Controller Pair, $19.95, for operation)
#ATCX2662 Hangman
#ATCX26 64 Brain Games
(requires #ATCX50 Keyboard Controller Pair, $19.95, for operation)
(1 lb) **$29.95** each:
#ATCX2613 Adventure
#ATCX2631 Superman
#ATCX2632 Space Invaders
#ATCX2652 Casino
(1 lb) **$39.95** each:
#ATCX2611 Indy 500 (2 lbs)
#ATCX2617 Backgammon
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(requires #ATCX50 Keyboard Controller Pair, $19.95, for operation)
#ATCX2645 Video Chess
(1 lb) **$11.95** each:
#ATCX2644 Flag Capture
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New from Atari:
Game Library Storage Unit
Front loading, lever controlled, holds 8 cartridges with separate storage for instruction books.
#ATORG300 (3 lbs) **$9.95**

ACTIVISION Software, compatible with Atari Video Computer System,™
(1 lb) **$21.95** each:
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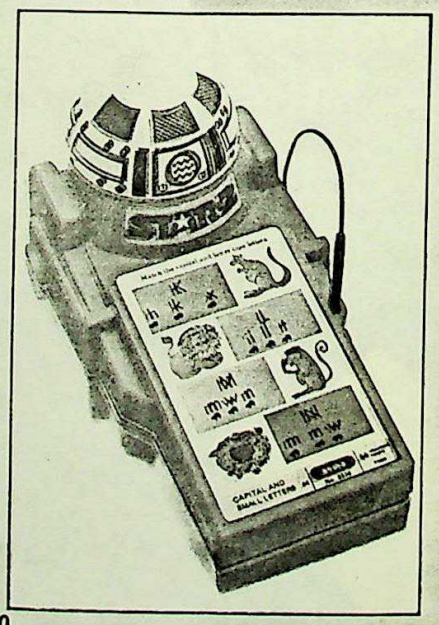

STAR 2 - *The Teaching Robot* NEW

Star 2 reinforces every correct answer with flashing lights and space age sounds in self-paced, self-correcting drills. The child places a question card on the grid plate and uses the safety probe to choose an answer. Sequenced tests and reviews take the child through logical development of subject areas. The Starter Program (included) and additional programs (available separately) have been developed by educators to supplement and enhance basic curriculum concepts.
#STAR2 (6 lbs) **$39.95;**
Requires #ER9VOLT Battery (1 lb) $1.75 or #DS6908 9-volt adapter (2 lbs) $6.95.

Star-2 20-card Learning Packets (3 lbs) **$5.95** each:

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ST8361 Multiplication: Set II
ST8369 Potpourri of General Skills
ST8370 Understanding What You Read
ST8371 Building Vocabulary

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